Jamhuuriyadda Federaalka Soomaaliya

Wasaaradda Waxbarashada,
Hiddaha Iyo Tacliinta Sare.

Teknooloji

Tababarka Macallimiinta Waxbarashada Aasaasiga ah

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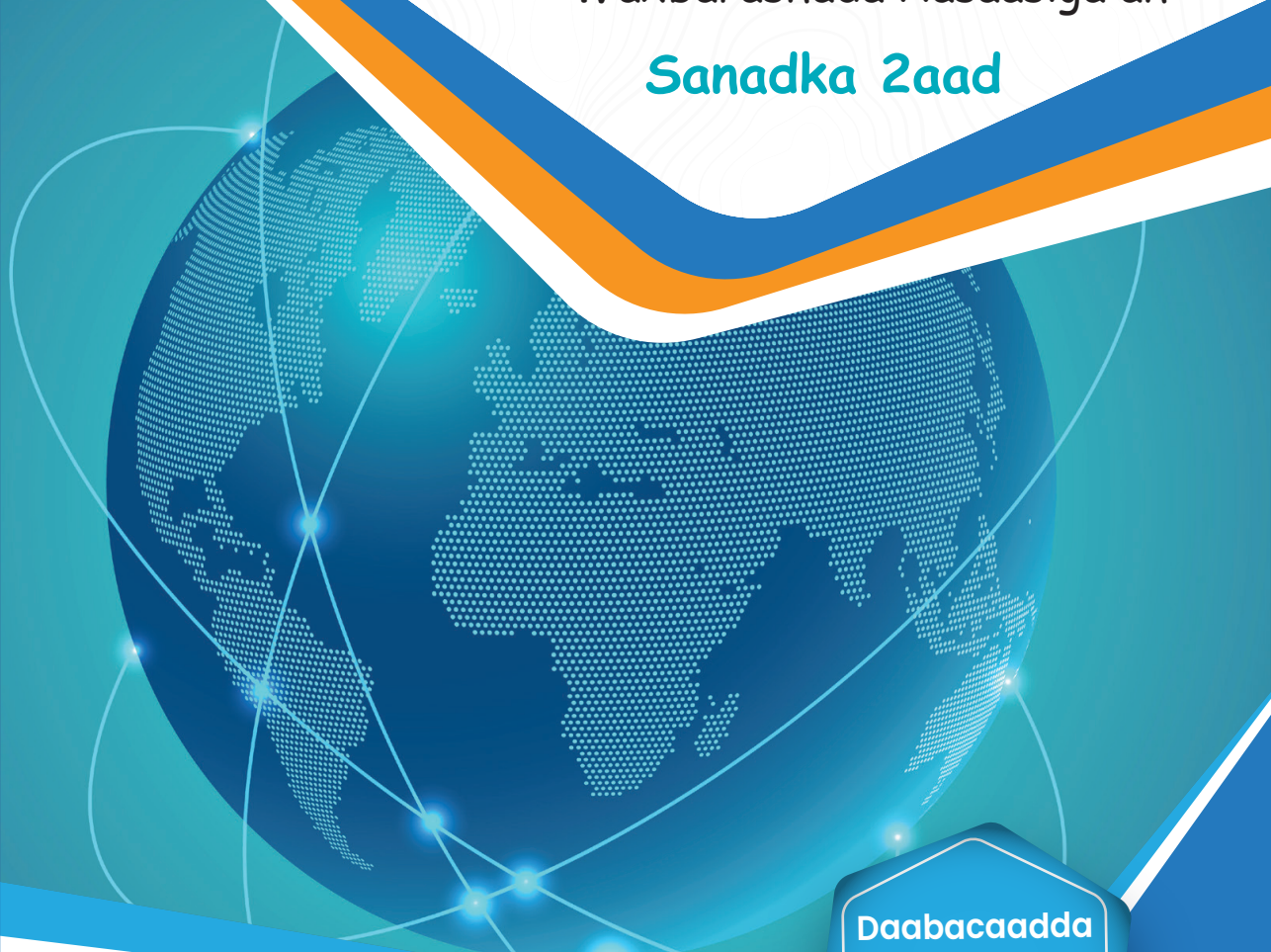

Daabacaadda
2
2025

Tusmada Buugga

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1. Hordhac: Maaddada Teknoolojiyada waa maaddo muhiim u ah macallimiinta. Qaabka gudbinta casharada waxaa loogu tala galay in uu ahaado qaab isku dhaf ah (blended learning); sida fool ka fool (face to face), qaab fogaan arag ah (distance learning) iyo waliba qaab wax is baris (self-study). Waxaa loo qorsheeyay in lagu qaato 75 saacadood oo isugu jiri doona seddexda qaybood ee kor ku xusan.

Waxaa maaddadan lagu baran doonaa oo ay ka koobnaanaysaa cutubyadan:

Cutubka 1aad: Ahmiyadda iyo Adeegsiga Teknoolojiyada.

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2. Ujeedooyinka Maddada

Bare-ardaygu dhammadka cutubyada bugga waxaa laga rabaa in uu;

(1) Ogaado ahmiyada iyo meelaha loo adeegsado teknoolojiyada

(2) Kal garan karo qeybaha uu ka kooban yahay kombiyuutarka

(3) Kal saari karo Faraqa u dhexeeya xog iyo macluumaad.

(4) Adeegsan karo qeybaha ugu muhiimsan barnaamijka Windows – ga

(5) Awoodi karo sida loogu shubo ama looga saaro barnaamij kombiyuutarka.

(6) Adeegsan karo barnaamijyada Micrsoft Office.

(7) Awoodi karo abuuridda, daabacaadda iyo la wadaagida dokumentiga dad kale.

(8) Awoodi karo abuuridda iyo wadaagida bandhigyada(presentations)/

(9) Awoodi karo maamulida iyo keydinta xogta ee xaashi-hawleedka(worksheet) ama xaashiyaha(speadsheet).

3. Mirodhalka

- Bare – ardagu wuxuu awoodo doonna in uu cilad bixiyo kombuyuutarka sidoo kale ku shubida iyo ka saarida barnaamij kombiyuutarka.
- Bare-ardaygu wuxu fahmi doonaa hawlaha mid kasta oo ka mid ah barnaamijyada waaweyn ee Xafiiska(Ms Office program) uu qaban karo.
- Bare-ardaygu wuxu awood u yeelan doonaa inay si madaxbannaan u abuuraan dukumiintiyo qaab xirfadaysan loo diyaariyay, bandhigyo, iyo xaashi-hawleed(worksheet).
- Bare-ardaygu wuxuu fahmi doonaa sida loogu isticmaalo Word, Excel, iyo PowerPoint xaalado kala duwan oo xirfadeed, waxbarasho, iyo shaqsiyeed.

4. Habka dhigidda iyo baridda (TL methods)

- Habka dhigista waxaa udub dhexaad u ah ardayga ayaadoo lagu bilaabayo waydiimo ku saabsan cashirka maalinkaas, kadibna lala wadaagayo macluu-maad dheeri ah oo la xariira mooduuca cashirka oo ay la socdaan tusaalooyin, kadib waxaa la hubinaya in ardaydu ka shaqeeyaan waxqabadyada iyo cilmi barista casharada.

5. Qiimaynta

- Waa in la hubiyaa in ardaydu ay xaqiijiyeen oo ay gaareen ujeedooyinka cashar walba. Ayadoo la adeegsanayo waydiimo la xariira: qeexitaano, sharaxid, falan-qayn iyo tusaale ka bixin waxyaabaha casharada lagu bartay. Baraha waxa u adeegsan karaa su'aalo dheeri ah oo uu ku hubinaayo in la fahmay casharka.

6. Tixraacyada

- Manhajka cusub ee qaranka, 2019.
- Discovering Computers 2011 [Living in a Digital World]
- Authors: Gary B. Shelly Misty E. Vermaat
- Microsoft Office 2010
- Authors: Beskeen • Cram • Duffy Friedrichsen • Reding
- UNESCO ICT Competency Framework for Teachers

Cutubka 1aad: Ahmiyadda iyo Adeegsiga Teknoolojiyadda

Hordhac:

Cutubkaan waxa aan kaga hadli doona Ahmiyadda iyo adeegsiga Teknolojiyadda. Teknolojiyaddu waxa ay noqotay qayb nolosheenna ka mid ah oo lama huraan ah. Lama qiyaasi karo culaysyada iyo caqabadaha na soo food saaraayo haddii aan damacno in aan ku noolaanno adduunka maanta ee horumarka xawliga ku socda samaynaaya tiknoolojiya la'aan. Waxaa la soo saaray farsamo kala duwan oo fududeeya qeybaha nolosheenna. Tusaale ahaan aadanuhu waxa uu daah furay danabka (Korontada) oo isbedel wayn ku samaysay wax soo-saarka, gaadiidka, caafimaadka, bilicda deegaanka iwm. Kombiyuutarka iyo Internerka ayaa ayagana isbedel wayn ku sameeyay nolosheenna.

Dhinaca kale, Beeruhu waxa ay ka mid yihiin tirarka ay ku taagan tahay noloshu, sidaas darteed waxa ay u baahan tahay horumarin.

Teknolojiyadda beeraha waxa ay soo martay heerar kala duwan. Waxaa ka hadli doonnaa sida Teknolojiyadda uga qayb qaadato howlaha abuuridda iniinta, falidda beerta, waraabinta dalagga, goynta, sifaynta iyo nadiifinta maxsuulka, iyo raridda dalagga soo go'ay.

Dhinaca Teknolojiyadda waxbarashada, waxbarashadu waxa ay soo martay heerar kala duwan oo ku xirnaa farsamada iyo aqoonta bani'aadamka.

Waxa aan soo qaadan doonnaa sida Teknolojiyaddu wax uga badashay Waxbarshada ardayga, Waxdhigista macallinka, Keydinta xogta, Hawlaha maamulka waxbarashado

Caafimaadka qofka ama bulshadu si loo ilaaliyo dadaal badan ayaa lagu bixiyey. Teknolojiyadda Caafimaadka ee ku baran doonno cutubkaan waxaa ka mid ah Adeegsiga iyo heerarka teknoolojiyada ee caafimaadka, Cabbiraadda heerkulka, Cabbiraadda cadaadiska dhiiga, Cabiraadda miisaanka qofka, Samaynta daawada

iyo Cabiraadda aragga indhaha.

Dhinaca Teknolojiyoda Gaadiidka, heerar kala duwan ayay soo martay, waxa aan sidoo kale cutubkaan kaga hadli doonnaa Teknolojiyadda gaadiidka sida gaadiidka barriga, gaadiidka badda, iyo gaadiidka hawada.

Tamartu waa kartida hawl lagu qabto. Hawl kasta oo la qabanayo waxa ay u baahan tahay Tamar. Cutubkaan waxa aan sidoo kale ku eegi doonnaa isha tamarta, noocyada tamarta iyo kaalinta Teknolojiyadda ee adeegsiga tamarta.

Dhinaca Nabadda iyo Amniga, cutubkaan waxa kale oo aan ku baraneynaa teknoolojiyada bani'aadamku adeegsado Si uu u ogaado, ugana hortago waxyaabaha dhalin karaan in nabadda iyo Amniga dhib soo gaaro. Waxa aan baranaynaa Ahmiyadda Nabadda, Kameerooyinka ilaalada, Qalabka baara birta iyo Baaridda garoomada diyaaradaha.

Ujeeddooyinka Cutubka

Dhammaadka cutubkan Bare-ardaydu waxa ay awood u yeelanayaan in ay:

1. Qeexaan ereyga 'teknoloji'
2. Sharxi karaan heerarka teknoolojiyada
3. Faahfaahin ka bixin karaan adeegsiga teknoolojiyada dhinacyada kala duwan ee nolosha sida beeraha, waxbarashada, caafimaadka, gaadiidka, isgaarsiinta iyo tamarta.
4. falanqeeyaan sida ay teknoolajiyada beeraha isbeddalka ugu sameysay dhulka wax lagu beerayo
5. Sharxi karaan sida Teknolojiyaddu wax uga beddeshay waxbarshada ardayga iyo waxdhigista baraha
6. Sharax guud ka bixiyaan heerarka teknoolojiyada caafimaadka
7. Sharxaan heerarka ay Teknolojiyadda gaadidka soo martay

8. Sheegaan noocyada gaadiidka la adeegsado ee berriga iyo biyahaba
9. Sharxi karaan adeegsiga iyo heerarka isgaarsiintu soo martay
10. Sharxi karaan faa'iidada tamarta Qorraxda
11. Faahfaahin ka bixin karaan adeegsiga teknoolojiyada Tamarrada Dabaysha iyo Biyaha
12. Sharraxaan qeybaha kala duwan oo guud ahaan la xiriira adeegsiga Teknoolojiyada ee howlaha sugidda nabadda.
13. Sharxi karaan xiriirka teknoolojiyadda ay la leedahay diinteena suuban.
14. Sharxi karaan sida ay teknoolojiyadda ay uga qayb qaadato nabadda

Tusmada Cutubka

Cutubkaan waxaanuu ka kooban yahay saddex cashar oo kala ah:

Casharka 1aad: Ahmiyadda Teknolojiyadda

Casharka 2aad: Adeegsiga Teknoolojiyada ee Howlaha Beeraha, Waxbarashada iyo Caafimaadka

Casharka 3aad: Teknoolojiyada Gaadiidka, Isgaarsiinta iyo Tamarta

Casharka 4aad: Teknoolojiyada iyo Nabadda

Casharka 5aad: Teknoolojiyadda iyo Diinta

Casharka 6aad: Tiknoloojiyadda Waxbarashada gaarka ah

Habka Waxbaridda

1. **Sharaxaad**
   Macallinku wuxuu si kooban oo cad u sharxayaa casharka, isagoo diiradda saaraya muhiimadda iyo adeegsiga teknoolojiyada.

2. **Dood ku saabsan ahmiyadda iyo adeegsiga teknoolojiyada**
   Ardayda waxaa la gelinayaa dood furan si ay ugu falanqeeyaan muhiimadda teknoolojiyada iyo sida ay saameyn ugu leedahay noloshooda maalinlaha ah iyo waxbarashadooda.

3. **Koox-koox iskula weydiiya uguna dooda mawduuca**
   Ardayda waxaa loo kala qaybinayaa koox-koox si ay isugu weydiiyaan su'aalo la xiriira mawduuca ayna ugu doodaan si is-dhaafsi fikir iyo wada shaqeyn u dhacdo.

4. **Akhrinta buugaag dheeraad ah**
   Ardayda waxaa lagu dhiirigelinayaa inay akhriyaan buugaag dheeraad ah ama qoraallo la xiriira teknoolojiyada si ay u helaan aragtiyo dheeraad ah.

5. **Su'aalo iyo Jawaabo**
   Waxaa la qaadanayaa waqti loogu talagalay su'aalo iyo jawaabo si loo xoojiyo fahamka ardayda iyo in la saxo wax kasta oo mugdi ku jiro.

6. **Tusin (Practical)**
   Waxaa la sameynayaa tusin ama hawl-galyo toos ah (practical activity), sida isticmaalka qalab ama barnaamijyo teknoolojiyadeed si ardaydu ugu arkaan si ficil ah.

7. **Muuqaalo**
   Waxaa la daawanayaa muuqaallo la xiriira teknoolojiyada si kor loogu qaado xiisaha ardayda iyo fahamka muuqaal ahaan.

Su'aal: Dugsi quraannada qaar waxaa ardayda lagu farbaraa looxaan kuwa kalena buugaag, maxay ku kala duwan yihiin, dhib iyo dheef? Maxaadse is leedahay wuu ka sii horreeyay isticmaalka looxa?

Ujeeddooyinka Casharka

Dhammaadka casharkan Bare-ardaydu waxa ay awood u yeelanayaan in ay:

1. Qeexaan erayga 'teknolojiya'
2. Sharxi karaan heerarka teknoolojiyada
3. Faahfaahin ka bixin karaan adeegsiga teknoolojiyada dhinacyada kala duwan ee nolosha sida beeraha, waxbarashada, caafimaadka, gaadiidka, isgaarsiinta iyo tamarta.

b. Waa maxay Teknooloji?

Ereyga teknooloji waxa uu ka kooban yahay labo erey oo Giriik ah oo isku lammaan kuwaas oo kala ah Tekno oo machaheedu yahay xirfad iyo lojiya oo macnaheedu yahay barasho.

Teknoolojiyaddu waa u adeegsiga aqoonta sayniska ujeedooyin iyo adeegyo wax ku ool ah, ha ahaato xagga warshadaha ama nolol maalmeedkeenna. Ujeedku waa in si habeysan loo isticmaalo qalabka iyo agabka la heli karo iyo in horumarin joogto ah la sameeyo, si loo xalliyo baahiyaha bani'aadamka ee aan dhamaadka lahayn isna badbadala.

Qalinka aad casharka ku qoreysid, jeesada macallinka, buugga qoraalka, saacadda aad xiran tahay, dharka aad gashan tahay iyo mobayl-ka dhammaan waa aqoontii oo loo adeegsaday fududeynta baahiyaheenna.

t. Heerarka Teknoolojiyada

Haddii aan soo fahamnay waxa ay tahay teknoolojiyada, su'aashu waxa ay tahay:

maxay Teknolojiyaddu ugu jirtaa isbedel joogta ah?

Teknoolojiyadu waxa ay hadba isla bedbedalaysay baahida bani'aadamka ee dhinaca huga, cuntada, isgaarsiinta, caafimaadka, waxbarashada iwm. Horumarka cilmiga sayniska waxa uu ku saleysnaa xallinta mushkiladaha uu qofka iyo bulshadu kala kulmaan deegaanka ay ku nool yihiin.

Bani'aadamka waxa uu adeegsaday bilowgii hore aalado fudud oo uu ku maareeyo noloshiisa sida beer falashada, ugaarsiga, dhismaha guryaha, ka hortaga khatarta iwm. Waxa uu soo maray waqti uu gaadiid ahaan u isticmaali jiray dameeraha iyo fardaha iwm. Waxa uu hindisay matooro ku shaqeeyo uumi kuwaas oo loo adeegsaday baabuur iyo tareenno.

Is-beddelka tiknoolajiyada caalamku samaynaayay waxaa sababay baahida joogatada ah ee aadanaha ee ah in horumar laga sameeyo wax soo saarka ama adeegyada si loo xaqiijiyo laba hadaf midkood: (1) in la kordhiyo wax soo saar badeecad ama adeeg la bixinaayay ayada oo aan xaddiga raasumaalka la kordhin ama (2) in la soo saaro wax cusub ama wax tayo ahaan ka sarreeya wixii la haystay. Horumarka tiknoolajiyada waxa ay qayb wayn ka qaadataa kor u qaadista heerka nolosha ee aadanaha.

Isbedelka Teknolojiyadda samayso waxa uu u dhacaa laba siyaabood oo kala geddisan, iyadoo tartiib tartiib loo kordhinayo tayada wax soosaar ama adeeg ee taknoolojiya hore loo adeegsanaayay, iyo iyada oo la soo saaro teknoolojiya cusub oo lagu xallinaayo baahi hore u taagnayd.

j. Teknolojiyadda iyo Xallinta Mushkiladaha

Teknooljiyadu waxa ay noo xallisaa baahiyo badan oo ay adag tahay in aan si fudud u maareynno (xallinno).

Tusaale:

Gaari gacanku waxa uu noo fududeeyay qaadidda xamuul ama alaab ay adag tahay in aan si sahlan ugu qaadno gacmaheenna, una geynno meel fog. Waa

nimco Allaah nasiiyey in bani'aadamku fakeraan ka dibna xallistaan caqabadaha nolosha.

Sheeko xiiso leh

Waxaa jiray boqor dhul aad u ballaaran ka talin jiray. Waxa uu damcay in uu kormeer lug ah ku soo maro boqortooyadiisa. Markii uu soo noqday waxa uu dareemay lugihii oo bararay oo aad u xanuunaya waayo kabo ma jirin xilligaas. Si uu u xalliyo dhibkan uu dareemay waxa uu amar ku bixiyey in waddooyinka oo dhan maqaar lagu fidiyo.

Laakiin nin ka mid ahaa la taliyaashiisii ayaa ku yiri wey fududdahay oo waxa aan kuu sameynaynaa maqaar yar oo aad kabo ka dhigato. Sheekadaan xiisaha leh waxa aan ka fahmeynaa in teknoolojiyadu xalliso dhibaatooyin badan.

Waxqabadka 1aad:

Waxa aan koox-koox uga doodeynaa heerarka ay soo mareen Teknoolojiyada dhismaha guryaha

Waxqabadka 2aad:

Waxa aan koox-koox uga doodeynaa heerarka ay soo mareen beera falashada Soomaalida ee dhanka teknoolojiyadda

Waxqabadka 3aad:

Waxaa aan qorayaa min hal tusaale oo muujinaaya sida Teknolojiyadda loogu adeegsado:

- Gurigeenna _____ , _____
- Dugsigeenna _____ , _____
- Fasalkeenna _____ , _____
- Cisbitaallada kuu dhow _____ , _____
- Masjidka aad ku dukato _____ , _____

Waxqabadka 4aad:

Waxa aad wax ka qortaa heerarka uu soo maray huga (dharka) uu aadanuhu maanta xirto, laga soo bilaabo Aabbe Aadam iyo Hooyo Xaawa.

Waxqabadka 5aad:

Waxa aad qortaa teknoolojiya aad adiga ku xallisay baahi gaar ah oo ku haysay

Waxqabadka 6aad:

Waxa aan koox-koox uga doodeynaa inaan isbarbardhig ku samayno Teknolojiyadda fududaynaysa waxbarashada ee hadda laga adeegsado Soomaaliya iyo kuwa waddamada kale ee caalamka laga adeegsado.

Gunaanad

Casharkan waxa aan ku soo barannay

1. Ereyga Teknoolajiya waxa uu ka kooban yahay labo erey oo Giriik ah oo isku lammaan kuwaas oo kala ah Tekno oo macnaheedu yahay xirfad iyo lojiya oo macnaheedu yahay barasho.
2. Teknoolajiyadda waa xirfado ama xeelado la isku geeyey ayada oo la isticmaalayo habab kala duwan si loo diyaariyo adeegyo waxtar leh.
1. Saameynta iyo isbedelka ay teknoolojiyada ku sameysay nolosheena aad ayey u badan tahay.
2. Teknoolojiyaddu waxa ay soo martay heerar kala duwan.
3. Teknoolojiyadu waxa ay xallisaa mushkilado badan oo nolosha ka jira.
4. Teknoolojiyadu waxa ay isbedel ku sameesay beeraha, waxbarashada, caafimaadka, isgaarsiinta, gaadiidka iwm.

Layli

1. Sharax kooban ka qor heerarka teknoolojiyadu soo martay.
2. Waa maxay ujeeddooyinka isbedelka teknoolojiyadu sida joogtada ah u samayso?
3. Sheeg afar ka mid ah faa'iidooyinka ay teknoolojiyadu leedahay?
4. Teknoolojiyadu waxa ay xallisaa mushkildaha bulshada haysta. Sharax ka bixi hawraartaas.
5. Qor sheeko cusub oo xiiso leh oo ka hadleysa teknoolojiyada sida ay wax u xalliso?
6. Wax ka qor qaabkii ay Soomalidu u samayn jirtay dharka loo yaqaan Aliindiga.

5. Qoraal yar ka qor sida ay adiga kuu saameysay teknoolojiyadu.

Casharka 2aad Adeegsiga Teknoolojiyada ee Howlaha Beeraha, Waxbarashada iyo Caafimaadka

Su'aal: Teknolojiyaddu maxay ku kordhin kartaa howlaha caafimaadka?

Ujeeddooyinka Casharka

Dhammaadka casharkan Bare-ardaydu waxa ay awood u yeelanayaan in ay:

1. Falanqeeyaan sida ay teknoolajiyada beeraha isbeddalka ugu sameysay dhulka wax lagu beerayo
2. Sharxi karaan habka abuuridda iniinta, waraabinta beerta, sida looga ilaaliyo xayawaanka beerta baabi'iya, dariiqada loo falo beerta iwm.
3. Faahfaahin ka bixin karaan in waddankeenna kheyraadka uu ku tiirsan yahay ee ugu weyn ay yihiin xoolaha iyo beeraha.
4. Sharxi karaan sida Teknolojiyaddu wax uga beddeshay waxbarshada ardayga
5. Sharxi karaan sida teknoolojiyadu wax uga beddeshay waxdhigista baraha.
6. Muujin karaan (qoraal ama oraah) sida teknoolojiyadu u horumarisay kaydinta xogta dugsiga (Arday, macallin, shaqaale, ogab iwm)
7. Sharax guud ka bixiyaan heerarka teknoolojiyada caafimaadka
8. Sharxi karaan cabbiraadda cadaadiska dhiigga iyo faa'iidadeeda
9. Ka doodi karaan faa'iidada cabiraadda miisaanka qofka.
10. Ka bixin karaan fikrad guud sameynta daawada.

1. Teknoolojiyada Beeraha

Horumarinta Teknoolojiyada Beeraha

Waa muhiim barshada iyo adeegsiga Teknoolajiyada ee howlaha Beeraha, Waxbarashada iyo Caafimaadkaba.

Teknoolojiyada beeruhu waxa ay isbeddel weyn ku sameysay dhulka wax lagu beerayo, habka waraabinta beerta, sida looga ilaaliyo cayayaanka beerta baabi'iya, dariiqada loo falo beerta iwm. Waddankeenna kheyraadka uu ku tiirsan yahay waxa ugu weyn xoolaha iyo beeraha; sidaa darteed casharradaan waa muhiim.

Beeruhu waxa ay ka mid yihiin tiirarka ay ku taagan tahay noloshu; sidaas darteed waxa ay u baahan tahay horumarin. Teknoolojiyada beeraha waxa ay soo martay heerar kala duwan marka la fiiriyo dhinaca:

- Abuuridda iniinta.
- Falidda beerta.
- Waraabinta dalagga.
- Goynta, sifeynta iyo nadiifinta maxsuulka.
- Raridda dalagga soo go'ay.

- **Abuuridda iniinta**

Beeraha marka la beerayo iniinta ayaa lagu abuuraa (ridaa) dhulka oo haddii ay suurto gal tahay la sii nafaqeeyay. Si iniintaas u soo biqliso waxa u baahan tahay in qiyaas qoto ku habboon dhulka la galiyo, la isu jirsiiyo ka fogaansho ku habboon, iyo sidoo kale cadad sax ah in lagu rido gud walba. Beeralayda Soomaalida waxa ay abuurista iniinta u isticmaali jireen qalab ay ka mid yihiin yaanbo iyo miigo uu qofku dhulka ku qodo si iniinta loogu rido.

Hadaba waxaa jiraa makiinado loogu tala galay abuuridda iniinta sida ugu habboon uguna degdeg badan ee suurto gal ah, Makiinadahaas waxaa jiida Cagaf-cagaf, qaarkoodna dibida waa loo isticmaali karaa. Sawirka hoose waxaa ka muuqda makiinad ku haboon abuuridda iniinyaha galayda, digirta iyo looska.

- **Falidda Beerta**

Xirfadaha beer-faliddu waxa ay soo martay heerar kala duwan. Yaambadu waxa

ay ka mid ahayd aaladahii ugu horreyey ee loo adeegasan jiray falidda beerta. Sida sawirka ka muuqata Dibiyada waxaa loo adeegsadaa beer-falid. Horumarka teknoloojiyada beer-faliddua waxa ay gaartay in la adeegsado cagafcagafyo fududeeya beer-falidda, kuwaas oo beeqaamiya waqti iyo fududeeyana dhib la mari lahaa.

- **Waraabinta Beerta**

Dhirtu waa noole waxa ay u baahan tahay biyo si ay u koraan. Biyuhu waa nimco aad u weyn oo Allaah uu nasiiyey oo mudan in aan ku mahadinno (Al-xamdu lilaah). Beertu si ay u baxdo waa in la waraabiyaa. Hababka waraabinta waxa ay soo martay heerar kala duwan. Roobabka xilliyada kala duwan da'a waxa loo adeegsadaa waraabinta beeraha.

- **La Dagaallanka Noolaha dhiba beerta**

Si loo helo beer caafimaad qabta, maxsuulkuna u kordho waa in laga ilaaliyaa waxyaabaha dhibka u keeni kara beerta sida

- Cayaayanka
- Shimbiraha.
- Xayawaanka.

Beerta waxa dhib badan u geysta cayayaanka, shimbiraha iwm. Habab kala duwan ayaa looga ilaaliya beerta noolaha dhibka ku haya. Waxaa la adeegsadaa waraf dhawaaq dheer oo shimbiraha lagu eryo. Waxaa kale oo la adeegsadaa sun lagu buufiyo cayayaanka beerta waxyeelleeya.
Xayawaannada beerta daaqa ama burburiya waxa looga ilaaliyaa in loo sameeyo meegaar ood ah ama in silig lagu wareejiyo.

- **Goynta Dalagyada Beeraha**

Markii uu dalaggu bislaato, waxa la gaaray xilligii maxsuulka la goosan lahaa. Habab badan oo kala duwan ayaa loo adeegsada goynta maxsuulka. Sawirrada soo socda waxa ka muuqda habab kala duwan oo lagu jaro dalagga beerta.

Masaggada, galleyda, sisinta, muuska iyo dalagyada kale waxa ay u baahan yihiin aalado kala duwan loo adeegsada goynta.

- **Raridda Maxsuulka**

Marka beertu soo go'do waxaa loo baahan yahay in la geeyo maxsuulka meelo kala duwan sida: guryaha, suuqyada iwm. Dadka qaar waxa ay ku soo qaadaan dhabarkooda sida ka muuqata sawirka.

Gaadiid kala duwan ayaa loo adeegsada si loo geeyo maxsuulka meesha loo rabo. Beeraha magaalada ka fog, waddooyin fiicanna aan lahayn waxaa loo baahdaa gaadiid gaar ah oo mari kara waddooyinka aan habaysneyn.

Waxqabadka 1aad:

Waxa aan koox-koox uga doodeynaa:

Haddii aan u baahdo inaan beer ka sameysto meel geedo badan waa maxay

tallaabada ugu horreysa ee aan qaadayo inta aan iniinta dhulka gelin iyo teknoolojiyada ay hawshaas u baahan tahay?

Waxqabadka 2aad:

Cilmi Baaris

Waxa aan baarayaa oo wax ka qorayaa teknoolojiyada loo isticmalo la dagaalanka cayayaanka beeraha.

Waxqabadka 3aad:

Waxa aan koox-koox uga doodeynaa teknoolojiyada waraabinta beeraha ay isticmaalaan Soomaalida.

Gunaanad

Waxa aan ku soo barannay qaybtan:

Teknoolojiyada beeraha waxa ay soo martay heerar kala duwan

Teknoolajiyada beeruhu waxa ay isbeddel weyn ku sameysay dhulka wax lagu beerayo, habka sida ugu habboon uguna degdeg badan iniinta loo abuuro, habka waraabinta beerta, sida looga ilaaliyo cayayaanka beerta baabi'iya, dariiqada loo falo beerta iwm.

Beeraleyda qaar waxa ay beeraha ku waraabiyaan gacan, qaar waxa ay adeegsadaan kanaalloiyomatoorro.

Si looga ilaaliyo cayayaanka beerta waxyeellaada u Keena sun ayaa lagu buufiyaa.

Xayawaannada beerta daaqa ama burburiya waxaa looga ilaaliyaa in loo sameeyo meegaar ama silig lagu wareejiyo.

Maxsuulka beerta waxa lagu soo raraa dameerro, baabuur iyo cagafcagafyo. Dadka qaar waxa ay ku soo qaadaan dhabarkooda.

Layli

1. Sharax kooban ka bixi heerarkii ay soo martay
   - Waraabinta beerta
   - Falidda beerta
2. Maxaa ugu wacan in beerta la buufiyo?
3. (Cilmibaaris).Qoraal kooban ka qor sida beerta loo nafaqeeyo
4. Haddii waalidkaa beer leeyahay maxaa aad kula talin lahayd si looga ilaaliyo xayawaannada beerta cuna ama burburiya?

2. Teknooliyada Waxbarashada

Teknoolojiyada waxbarashadu waxa ay soo martay heerar kala duwan oo ku xirnaa farsamada iyo aqoonta bani'aadamka. Teknoolojiyadu dhinaca waxbarashada waxa ay fududeysay howlo badan oo awal si dhib badan loo qaban jiray. Waxa ay fududeysay:

- Waxbarshada ardeyga.
- Waxdhigista macallinka.
- Keydinta xogta
- Hawlaha maamulka waxbarashada.

Teknoolojiyada waxa ay horumar ku samaysay barashada xisaabta, sayniska, cilmiga bulshada, kombiyuutarka iyo dhammaan laamaha waxbarshada. Qaybtan casharka waxa aan ku sharxi doonnaa sida teknoolojiyadu saameyn ugu yeelatay xagga waxbarashada.

- **Qoraalka iyo Teknoolojiyada**

Qoraalku waa habka uu bani'aadamku ugu beddelo oraahda wax la akhrin karo.

Qalabka loo adeegsado qoraalku waxa uu soo maray heerar kala duwan

Tusaale ahaan qalinka iyo warqadda aad casharka ku qoreyso heerar kala duwan ayey soo mareen. Waxa jiray Waqti qoraalka lagu qori jiray darbiyada, maqaarka xoolaha, caleemaha iyo laamaha geedaha iwm. Dugsiyada Qur'aanka qaar waxa ay ardeydu casharka ku qoraan loox laga soo qoray geed ayaga oo isticmaalaya qalin geed laga qoray iyo khad dhuxul laga riiqay (sameeyey)

Bal ka faker faraqa u dhexeeya qalinka buugta iyo qalinka looxa. Labada qalin maxay ka sameysan yihiin? Keeba ku fiican qoraalka? Labadooda mid kee waqti badan la adeegsan karaa?

Qoraalka Casriga: Maanta waxaa horumar laga sameeyey aaladaha wax lagu qoro. Waxaa la soo saaray qalimaan casri ah, warqado, iyo madbacado wax lagu daabacado. Macalimiintu waxa ay isticmaalaan jeeso ama qalin lagu qoro sabuurada. Bare-ardayoow bal is waydii waa maxay faraqa u dhexeeya jeesada iyo qalinka sabuuradda lagu qoro.

Teknoolojiyadu xilligaan deg deg ayey ku socotaa, waxa aana la soo saaray aalado wax lagu qorto sida computer iyo qalab kale oo casri ah (sida: IPad ama tablet). Hadaba, maxaad isleedahay qalabyadan casriga ee hoos sawiradoodu ka muuqdaan way u beddeleen qaabka waxbarashada manta.

- **Macallinka iyo Adeegsiga Teknoolojiyada**

Habka gudbinta casharka macallinka waxa ay soo martay heerar. Macallimiinta dugsiyada waxa ay isticmaalaan jeeso ama qalin si ay casharka ugu qoraan. Macallimiinta qaar waxa ay isticmaalaan qalab casi ah oo lagu soo bandhigo casharka sida borojaktarka (projector) ama Overhead projector.

Borojaktarka (projector) waxaa uu fududeeyaa gudbinta casharka iyada oo macallinku uu ku soo bandhigi karo sawirro iyo videos uu si fudud ardaygu wax ugu fahmi karo, sidoo kale waxa uu macallinka ka xoreeyaa in uu wax badan gacanta kula qoro sabuuradda taas oo beekhaamisa waqti badan oo ku bixi lahaa gacan ku qorista casharada ee sabuuradda.

Cilmi baaris

Koox-koox ayaan u raadinaynaa faraqa u dhexeeya borojaktarka (projector) ama Overhead projector:

Goorma ayaa la adeegsadaa? Maxaa loo adeegsadaa? Waa maxay faraqa u dhexeeya labadooda?

- **Kaydinta xogta iyo Teknoolojiyadda**

Kaydinta xogta ama macluumaadka waa arrin muhiim ah. Xogtu waxa ay noqon kartaa xog ku saabsan dadka, xog ku saabsan kheyraadka dalka, iyo guud ahaan xogta looga baahan yahay hawlaha aqoonta iyo shaqada.

Kaydinta xogtu waxa ay soo martay heerar. Waqti ayaa lagu qori jiray dhagxaanta, darbiyada, maqaarka xoolaha iwm. Horumarka teknoolojiyaddu waxa ay gaartay in xogta lagu keydiyo kombiyuutarro iyo keydka internetka.

Tusaale: Xogta dadka deggan magaalo waxa ay u baahan tahay meel lagu keydiyo. Dawladda hoose waxa ay ururisaa xogta qoyska iyo qofka. Waxa ay kaydisaa xogta dhismayaasha iyo guryaha.

Dugsiyadu waxa ay keydiyaan xogta ardeyda (diwaan gelintooda, imtixaannadooda), xogta macallimiinta, xogta shaqaalaha iyo xogta qalabka waxbarashada. Bangiyadu waxa ay keydiyaan xogta macaamiisha iyo lacagtooda. Hay'adda Socdaalka iyo Jinsiyadda ee Soomaaliya waxa ay keydisaa xogta baasaborrada iyo dal-ku-galka (Visa). Shirkadaha xawaaldaha waxa ay keydiyaan xogta diraha, loo soo diraha iyo cadadka lacagta.

- **Xogta Ardeyda, Macallinka, Imtixaanka, Qalabka Dugsiga**

Xogta ardeyda waxa ka mid ah: Diiwaangelinta, Macluumaadka guud ee ardeyga Lambarkiisa, magaciisa, meesha uu ku dhashay, sanadka uu dhashay, degaanka, fasalka uu dhigto, Xaadirinta maalin laha ah ee ardeyga, Dhaqanka iyo heerka waxbarsho ee ardeyga

Xogta imtixaanka waxaa ka mid ah diiwaangelinta Lambar, magac, fasal, Magacyada maadooyinka, Natijada imtixaanka iyo shahaadooyinka, Natiijada imtixaanada waxaa lagu keydiyaa feylal iyo keydka maskaxda kombiyuutarka.

Xogta macallimiinta waxaa ka mid ah: Xogta guud ee macallinka, Maadooyinka uu dhigo, Xiisadaha uu dhigo iyo maalmaha shaqada

Xogta Qalabka Dugsiga. Dugsiga waxaa yaal agab badan oo ay ka mid yihiin:

Qalabka waxbarashada (sabuurad, jeeso, iwm) Kuraasta iyo miisaska, Qalabka sayniska iyo khariidadaha. Macalliniimta maadooyinka qaar sida sayniska waxa ay adeegsadaan weyneyso (microscope) si ayu tusaan ardeyda walxaha il-ma aragtada ah.

Waxqabadka 1aad:

Cilmi baaris

Waxa aan soo qorayaa meelaha kala duwan ee loo isticmaalo weyneysada iyo Teknoolojiyada ay isticmaasho

Gunaanad

Casharkan waxa aan ku soo baranay horumarka teknoolojiyada dhinaca waxbarasha.

Qoraalka iyo daabacadda waxaa laga sameeyey horumar ballaaran

Gudbinta casharka macallinka waxaa laga gaaray horumar gaar ahaan adeegsiga teknoolojiyada

Sayniska, xisaabta iyo maadooyinka kale waxa lagu horumariyey aalado fududeeya sida kombiyuutarrada, Weyneysada iwm.

Keydinta xogta ardeyga iyo macallinka waxaa loo adeegsaday qalab si fudud u maareyn kara xogtaas.

Waxaa la soo saaray qalab gacan-ku-qaad ah oo lagu keydsan karo casharrada iwm (sida IPad).

Qalabka dugsiga waxaa lagu xafidaa faylal ama kombiyuutarro.

Layli

Waxa aan ka jawaabayaa weydiimahaan soo socda

1. Sidee loo badiyaa warqadaha imtixaanka looga qaado ardeyda?
2. Maxay ku kala duwan yihiin qalinka sabuuradda iyo jeesada?
3. Sidee loo keydiyaa xogta ardeyda iyo macallimiinta?
4. Waxaa suuragal ah in mobeylka lagu keydsado casharrada. Maxay tilmaamaysaa arrintaas?
5. Waa maxay faa'idada 'projector-ka?
6. Qor xogta ku taalla warqaddaada dhalashada.
7. Cilmi baaris: Sharax ka bixinta IPad iyo faa'iidooyinkiisa.

3. TEKNOOLOJIYADA CAAFIMAADKA

Caafimaadka qofka ama bulshadu si loo ilaaliyo dadaal badan ayaa lagu bixiyey. Dadku waxa ay sameysan jireen daawo laga sameeyey dhirta ama xoolaha. Dabka waxaa loo isticmaali jiray daawo ahaan gaar ahaan in la gubo meelo ka mid ah jirka bani'aadamka. Qalliinku waxa uu ahaa nooc ka mid hababka daawada. Tallaalka la iska tallaalo cudurrada waxa uu soo maray heerar kale duwan, dhammaantoodna ujeedaddoodu waxa ay ahayd ka hortagga cudurrada. Toobinka ilaa hadda ayaa loo isticmaalaa daawo ahaan asaga oo la horumariyey. Diinta Islaamku waxa ay na fartay in la is daaweeyo.

Rasuulku scw waxa uu yiri: "Allaah cudur soo ma dejin illaa waxa uu soo dajiyey daawadiisa" (Bukhaari ayaa weriyey) qaybtan waxa aan ku baran doonnaa:

- Adeegsiga iyo heerarka teknoolojiyada ee caafimaadka.
- Cabbiridda heerkulka.
- Cabbiridda cadaadiska dhiiga.
- Cabbiridda miisaanka qofka.
- Sameynta daawada.
- Cabbiridda aragga indhaha.
- Sameynta Daawada

- **Adeegsiga Teknoolajiyadda Caafimaadka**

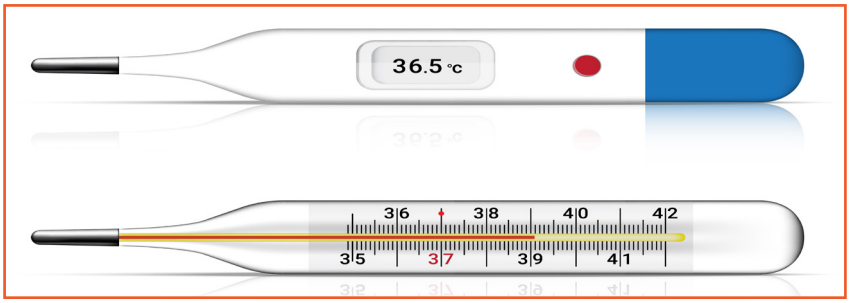
Bani'aadamka waxa uu jecelyahay in uu ku noolaado caafimaad, iskana ilaaliyo cudurrada. Sameynta daawada, qalliinka, ka hortaga cudurrada, la dagaalanka bakteeriyada iyo dulinka dhammaan waxa ay soo mareen marxalado kala hormarsan.

Waxaa horumar laga gaaray qalabka qalliinka, qalabka lagu baaro cudurrada ama bakteeriyada, qalabka lagu baaro uur-ku- jirta iyo jajabka lafaha.

Waxaa la horumariyey qalabka lagu cabbiro cadaadiska dhiigga, heerkulka, aragga, maqalka iyo ilmaha caloosha ku jira. Waxaa aad loo horumariyey teknoolojiyada beddelaadda xubnaha jirka sida kelyaha iwm. Waxaa la sameeyey qalabka maqalka ka kaalmeeya dadka dhegaha ka culus ama dhagaha la'.

- **Qalabka Cabbiraadda Heer kulka.**

Heerkulka qofka caafimaadka qaba waa 36.8 °C. Qandhadu waa calaamad muujinaysa in ay jirro ka jirto meel ka mid ah jirka. Heerkul-beegyada qaar waxaa la geliyaa kilkisha, qaar kale afka, nooc kalana dhegta, iyo kuwa lagu aadiyo wejiga. Waxaa la sameeyey heerkul-beegyo cabbiraadda qandhada (xummadda) jirka waxaa ka mid ah noocyada sawirka hoose.



Waxqabadka 1aad:

Haddii la heli karo mid ka mid ah qalabka cabirka heerkulbeegga, iska cabbir adiga oo soo qubaystay xilliguna qabow yahay, sidoo kale iska cabbir adiga oo jimicsi sameeyay, ama cadceeddu kulushahay soo socda. Ma jiraa farqi u dhaxeeyay labada cabbir? Maxaa sababay? Maxay tahay teknoolojiyada loo adeegsaday cabiraha heerkulbeega?

- **Qalabka Cabbiraadda Cadaadiska dhiigga iyo Garaaca wadnaha.**

Cadaadiska dhiigga waa cadaadiska uu dhiiggu ku hayo wadnaha iyo xididdada dhiigga. Dhakhtarku waxa uu cabbiraa meesha ugu sarreysa iyo barta ugu hooseysa ee cadaadiska dhiigga. Waxaa lagu cabbiraa cadaadiska dhiigga qalabyo kala duwan sida ka muuqata sawirada hoose. Kuwa digital-ka ah cabirka cadaadiska

dhiigga ka sokow waxa ay soo saaraan garaaca wadnaha ee qofka ee 1kii daqiiqo ah. Qofka qaangaarka ah oo caafimaadka qaba cadaadiska dhiggiisu waa 120/80 mm Hg, Garaaca wadnahana 73 jeer halkii daqiiqo.

Waxqabadka 2aad:

Booqo goob caafimaad ee aad tagi kartid. Ka warayso Cadaadiska dhiigga iyo Garaaca wadnaha ee bukaannada soo booqda xaruntaas hal maalin. Wax ka sheeg teknoolojiyada ay isticmaaleen?

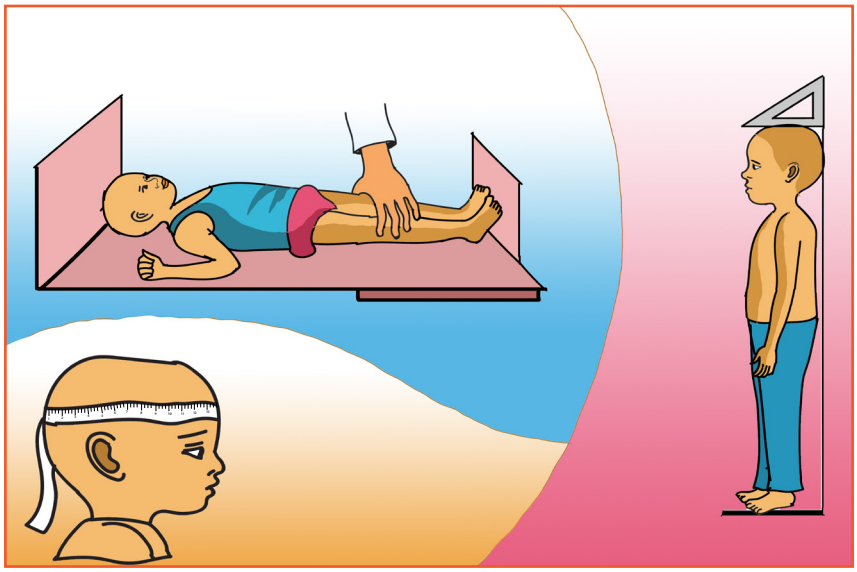
- **Cabbiraadda Miisaanka Qofka.**

Dhakhaatiirtu waxa ay isticmaalaan miisaan loogu talagalay qofka culayskiisa in lagu cabbiro. Waxaa lagama maarmaan ah in la cabbiro miisaanka qofka marka la siinaayo daawooyinka qaar ka mid ah.

- **Cabbiraadda dhererka qofka**.

Cabbiraadda dhererka walxaha waa muhiim. Cabbirka dhererka qofka gaar ahaan caruurta waxa uu tilmaamaa korriinka qofka. Waxaa la cabbiraa dhererka ilmaha yar.

Waxaa kale oo la cabbiraa wareegga madaxiisa. Cabbiraadda dhererka waxa ay soo martay heerar kala duwan. Waxaa lagu cabbiri jiray ul ama qof kale oo la dhinac joojiyo.



Waxqabadka 3aad:

Maqaal ka qor waxa ka dhexeeya dhererka ilmaha iyo caafimaadkiisa.

- **Cabbiraadda Aragga Indhaha.**

Araggu waa nimco Allaah na siiyey oo u baahan in aan dhawrno, una adeegsanno wixii faa'iido inoo leh. Dhakhaatiirtu waxa ay cabbiraan aragga isha iyo guud ahaan caafimaadka isha. Heerar ayuu soo maray qalabka lagu cabbiro isha iyo kuwa lagu qalo.

Waxqabadka 4aad:

Ka warayso qaar ka mid ah asaxaabtaada ama qaraabadaada ee qaata muraayadaha aragga caawiya kala duwanaanshaha qabdhismeedkooda iyo sida ay u caawiyaan muraayadahaas.

- **Sameynta Daawada**

Bani'aadamku waxa uu ku dadaalay in uu soo saaro daawo uu ku daaweeyo cudurrada. Heerar kala duwan ayey soo martay sameynta daawada. Daawada

waxaa laga sameyn jiray dhirta ama xayawaanka ama walxo dhulka laga helo. Diinta Islaamku waxa ay dhiirigelisay in la is daaweeyo. Horumarka teknoolojiyada daawada waxa uu isbeddel weyn ku sameeyey sida loo diyaariyo daawada, sida loo keydiyo iyo sida la isaga ilaaliyo dhibkeeda. Waxaa habboon in aan la qaadan daawo aan dhakhtar kuu qorin.

Gunaanad

Casharkaan waxa aan ku soo baranay:

1. Horumar aad u ballaaran ayaa laga sameeyey teknoolojiyada caafimaadka, dhinaca baaridda cudurrada, daaweynta iyo qalliinka.
2. Heer-kulka qofka caafimaadka qaba waa 36.8 C.
3. Cadaadiska dhiigga waa cadaadiska uu dhiiggu ku hayo wadnaha iyo xididdada dhiigga
4. Waxaa lagama maarmaan ah in la cabbiro miisaanka qofka marka la siinaayo daawooyinka qaar ka mid ah.
5. Dhakhaatiirtu waxa ay cabbiraan aragga isha iyo guud ahaan caafimaadka isha
6. Waxaa la sameeyey qalabka maqalka ka kaalmeeya dadka dhegaha ka culus ama dhagaha la'.
7. Waxaa la soo saaray teknoolojiyad lagula dagaallamo cayayaanka wax dhiba sida kaneecada.
8. Diinta Islaamka waxa ay dhiiragalisay in la is daaweeyo.

Layli

Waxa aan ka jawaabayaa weydiimahaan soo socda abbiraa?

1. Waa maxay qandho? Qalabkee lagu cabbiraa?
2. Xaggee dhiiggu cadaadisku ku hayaa?
3. Qalabkee lagu cabbiri karaa:
   - Miisaanka qofka
   - Dhererka qofka
4. Sidee ayaa loo hormariyey sameynta daawoovinka
5. Cilmi baaris: Qur'aanka iyo xadiiska maxey yiraahdeen: Malabka iyo xabbadsowdada.
6. Qoraal gaaban ka qor: sida loo hubiyo aragga qofka
7. Maxay adeegsadaan dadka dhegaha culus side ayey wax u maqlaan.

Casharka 3aad Teknoolojiyada Gaadiidka, Isgaarsiinta iyo Tamarta

Su'aal: Maxaa xiriir ah oo ka dhaxayn karaa Gaadiidka, Isgaarsiinta iyo Tamarta? Adeegsiga Teknolojiyadda muxuu ku kordhin karaa qeybahan?

Ujeeddoyinka Casharka

Dhammaadka casharkan Bare-ardaydu waxa ay awood u yeelanayaan in ay:

1. Sharxaan heerarka ay Teknolojiyadda gaadidka soo martay
2. Sheegaan noocyada gaadiidka
3. kala saaraan farqiga u dhaxeeyo gaadiidka barriga iyo kan biyaha
4. Faahfaahin ka bixin karaan saamaynta teknolojiyadda gaadiidku ku leedahay nolosha.
5. Sharxi karaan heerarka isgaarsiintu soo martay
6. Sheegi karaan isgaarsiinta la adeegsan jiray wagtiyadit hore
7. Sheegi karaan faa'iidada isticmaalkii hore ee isgaarsiinta sida
   b. Dabka
   t. Buunka
8. Tusaale ka bixin karaan isticmaalkii isgaarsiinta sida
   b. Boostada
   t. Teleefannada fiilada leh
9. Tusaale ka bixin karaan isticmaalka casriga ah ee isgaarsiinta side
   b. Teleefanada gacanta
   t. Internetka iwm.
10. Sharxi karaan faa'iidada tamarta Qorraxda
11. Faahfaahin ka bixin karaan adeegsiga teknoolojiyada loo adeegsado tamarta qorraxda
12. Tusaale ka bixin karaan faa'iidada tamarta Dabaysha

13. Faahfaahin ka bixin karaan adeegsiga teknoolojiyada Tamarta Biyaha

1. TEKNOOLOJIYADA GAADIIDKA

Heerarka uu soo maray gadiidku, sida gaadiidka barriga, gaadiidka badda, gaadiidka hawada iyo waxtarka iyo saameynta ay ku leeyihiin nolosheenna. Cutubkaan waxa aan ku baran doonnaa: Heerarka Gaadiidku soo maray, Gaadiidkii hore, Gaadiidka Berriga iyo biyaha iyo Teknoolojiyaddii Casriga ee Gaadiidka Berriga.

- **Heerarka Gaadiidku soo maray**

Gaadiidka ugu horreeya ee taariikhda aadanaha waa cagaha dadka, geela, fardaha iyo dameeraha, looxyo la isku rakibay oo loo isticmaali jiray in webiyada iyo badaha lagu gudbo.

قال الله تعال: ﴿وَٱلۡخَيۡلَ وَٱلۡبِغَالَ وَٱلۡحَمِيرَ لِتَرۡكَبُوهَا وَزِينَةٗۚ وَيَخۡلُقُ مَا لَا تَعۡلَمُونَ﴾

"Fardaha iyo baqlaha iyo dameeraha (waxa uu Allaah idiin kugu abuuray) inaad kortaan iyo qurux, waxa uuna abuuraa wax aydanaan ogeyn. (Al- Naxli: 8).

Horumarka teknoolojiyaddu waxa ay soo kordhisay in la sameeyo noocyo kala duwan oo gaadiidka berriga ah sida baaskiilka, mootooyinka, baabuurta, iwm. Sidoo kale waxaa la soo saaray gaadiidka badda oo ah doonyo ku shaqeeyo matooro iyo maraakiib kala duwan. Waxaa kale oo la hindisay gaadiidka hawada ama cirka oo ah diyaarado noocyo kala duwan leh.

Noocyada kala duwan ee gaadiidka waxa ay dadka ka caawiyaan in ay ku qaataan alaabo, ku guuraan, uguna safaraan meelo aad u fog waqti aad u gaaban. Taasi waa nimco Allaah ina siiyey. Dadku waxa ay u safraan si ay u gaaraan meelo u dhow ama ka fog waqti gaaban.

قال الله تعال: ﴿وَتَحۡمِلُ أَثۡقَالَكُمۡ إِلَىٰ بَلَدٖ لَّمۡ تَكُونُواْ بَٰلِغِيهِ إِلَّا بِشِقِّ ٱلۡأَنفُسِۚ إِنَّ رَبَّكُمۡ لَرَءُوفٞ رَّحِيمٞ﴾

"Waxaad ugu rarataan culeysyo xagga magaalo aydnaan gaareyn naf dhibkeed mooyee, Allaah waa u ture naxariista" (Al- Naxli: 7).

- **Gaadiidka Berriga.**

Gaadiidka berriga waa gaadiidka ugu badan ee aan isticmaalno si aan ugu aadno meelaha dhow iyo meelaha fog.

Gaadiidkii hore ee berriga waxaa kamid ah dameeraha, awrta, fardaha oo loo isticmaali jiray siyaabo kala duwan sida dhaaminta biyaha, guuridda reerka, raridda sahayda ama raashinka iwm.

Gaar ahaan fardaha waxaa loo isticmaali jiray qaadidda farriimaha deg degga ah iyo difaaca. Ciidankii daraawiishta waxa ay lahaayeen fardo aad u badan.

- **Teknoolojiyaddii Casriga ee Gaadiidka Berriga.**

Teknoolojiyada hormatay awgeed waxaa la hindisay in la sameeyo aalad ku shaqeyso matoorro oo loo isticmaalo gaadiid ahaan.

Waxaa la sameeyey aalad ka kooban matoor, shaagag iyo biro la isku rakibay sida gawaarida, mootooyinka, baaskiilada, kadibna waxa la sii hindisay basas waaweyn iyo tareenno. Gaadiidka ugu badan ee dad weynaha u isticmaalaan safarrada magaalada dhexdeeda sida dugsiyada, suuqyada iwm waxaa ka mid ah basaska.

Sidoo kale waxaa jiro tareen loo isticmaalo in loo kala raaco magaalooyinka. Tareenku waxa uu ku socdaa waddo u gaar ah oo ka duwan waddooyinka baabuurta caadiga ay maraan. Magaalooyinka waaweyn ee dunida waxa ay leeyihiin wadooyin dhulka hoostiisa maro oo ay isticmaalaan tareenada.

- **Gaadiidka Biyaha.**

Gaadiidka badda ama webiyada waxa uu soo maray heerar kala duwan oo hadba horumar sameenayey.

Doomo shiraacyo leh oo laga sameeyey tiirar, alwaax iyo masamiir ayaa loo isticmaali jiray gaadiidka badda ama webiyada. Markii ay hormartay teknoolojiyada waxa la casriyeeyay gaadiidka badda oo kala duwan, loona isticmaalo matoorro sida doomaha yaryar, doomaha waaweyn iyo maraakiibta

Ujeeddooyin kala duwan ayaa loo isticmaalaa gaadiidka badda waxa aana kamid ah:

- Kalluumeysiga.
- Dalxiiska
- Rakaabka.
- Xamuulka
- Difaaca
- Cilmi baarista.

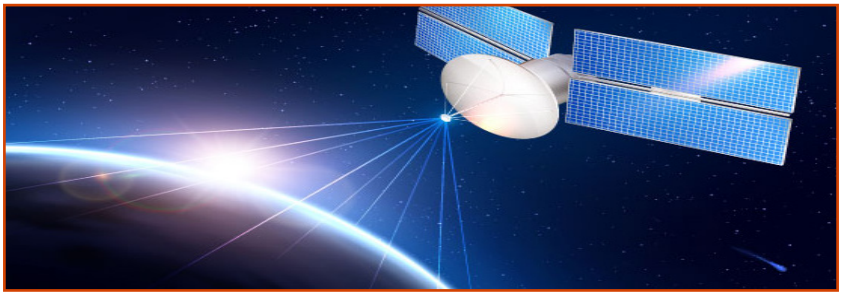
- **Gaadiidka Hawada.**

Gaadiidka loo isticmaalo hawada waa teknoolojiyada ugu casrisan waana gaadiidka ugu dhaqsiyaha badan waxa aana loo yaqaanaa dayuurado.

Socdaalka hawadu wuu ka lacag badanyahay, wuuna ka dhaqsiyo badanyahay safarada berriga iyo badda. Diyaaradu waxa ay noo duulin kartaa meel kasta oo adduunka ka mid ah saacado yar gudahood. Diyaaraduhu waxa ay leeyihiin garoon iyo nidaam hagid u gaar ku soo degto. Adeegsiga diyaaraduhu way kala duwan yihiin. Qaar waxaa loo isticmaalaa xamuul ahaan, qaarna rakaab ahaan.

Waxaa kale oo jira diyaarado loo isticmaalo daryeel caafimaad, ciidanka cirka, buufinta beeraha iwm.

Sidoo kale waxaa jiro gaadiidka dayax-gacmeedka loo yaqaano oo hawada loo isticmaalo kaas oo loogu talagalay sahminta hawada, isgaarsiinta, internetka iwm.



Teknoolojiyada waxa ay gaartay in la soo saaro diyaarado aan qofna wadin (darones) oo dhulka laga hago loona adeegsada siyaabo kala duwan sida millateriga, cilmi barista, sawir qaadidda, xamuul, buufinta beeraha iwm.

Waxqabadka 1aad:

Cilmi Baaris

Waxa aan baaraya magaca aqoonyahankii ugu horreeyey ee muslimka ahaa ee isku dayey in uu duulo.

Waxqabadka 2aad:

Waxa aan saaxiibkey kala doodayaa faa'iidooyinka diyaaradaha loo yaqaan "daroonka".

2. TEKNOOLOJIYADA ISGAARSIINTA

Xiriirka ka dhexeeya dadka iyo kala warqaadashadoodu waxa ay ahayd arrin aad muhiimu ah. Waxaa hortaagnaa arrinmo dhulka ay ka mid yihiin kala fogaanshaha, dhismaha dhulka sida buuraha, wabiyada, badaha iwm. Si bani'aadamku uu uga gudbo caqabadaha isgaarsiinta waxa uu gaaro in uu horumariyey hababka isgaarsiinta ilaa maanta uu gaaro in adduunkii oo dhan uu noqdo tuulo yar oo ilbiriqsiyo ku kala warqaadata.

Waxa aan aan qaybtan ku baran doonnaa: Taariikhda Isgaarsiinta, Qaadidda fariimaha, adeegga boostada, emaylada, Telefanada iyo Internetka.

- **Taariikhda isgaarsiinta:**

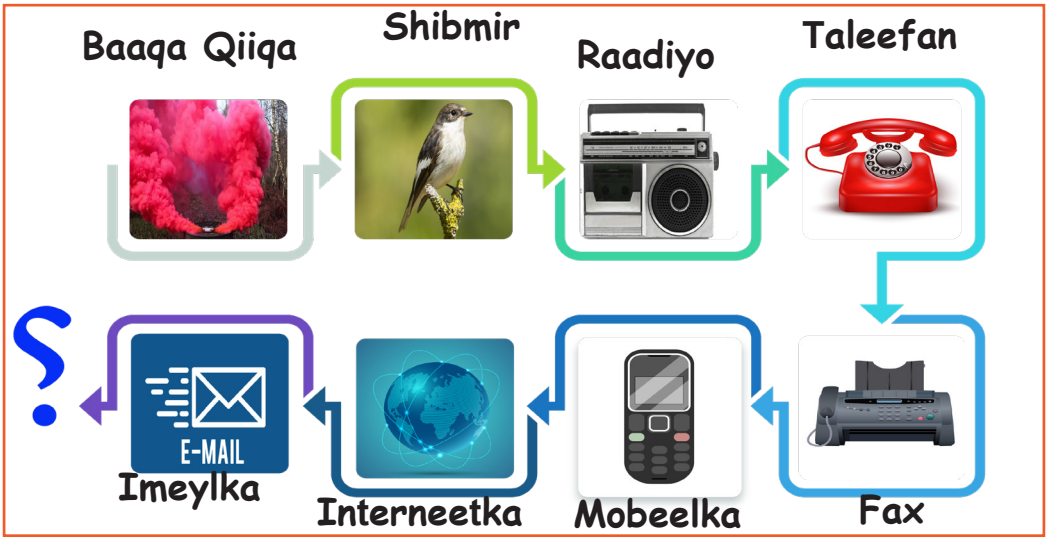
Isgaarsiin waa is dhaafsi xog ay is dhaafsadaan labo qof ama ka badan. Xogtaasi waxa ay noqon kartaa cod (voice), muuqaal (video) ama afgarad (code).

Marka laga hadlayo isgaarsiinta ama cilmiga isgaarsinta taariikhdiisa waxaa la oran karaa waxa ay aad uga horreysay dhammaan qeybaha kale ee teknoolajiyadda casriga ah, waxa uuna cilmigan la jaanqaaday bilow bani'aadamka. Isgaarsiintu waxa ay ka kooban tahay dire, loodire, fariin iyo habka gudbinta.

Tusaale

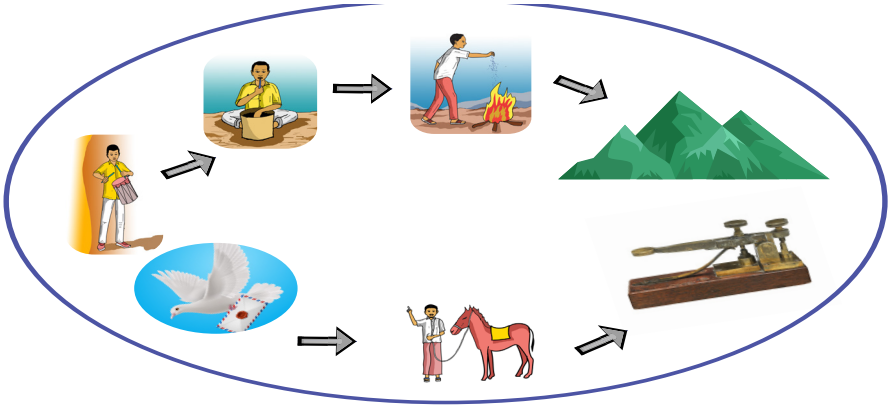
Isticmaalka dabka oo laga shido buuraha habeenkii ama qiiq maalinkii la - shidaa waa astaamayn dadkii hore u isticmaali jireen wargalin.

Bare-ardayoow isku day in aad sharax kooban ka bixiso farrimaha ay tilmaamayaan sawirradan. Tusahan hoose waxa uu cadaynaynaa guulihii taariikheed ee isgaarsiint soo martay.



- **Qaadidda fariimaha:**

Curashadii hab-qoraalka Kadio, waxaa soo if-baxay dhambaal oo ah war qoraal ah oo laysku diro si layska gaarsiiyo wax kasta oo la doonayo laysla ogaado. Haddaba, war-isgaarsiintu waxa ay soo martay marxalado iyo heerar kal duwan. Marba marka ka sii dambeysayna waa la hormarinayey habka war-isgaarsiinta.



Sidoo kale waxaa jiri jirtay xilli dadku ay warka isugu gudbin jireen durbaanka. Wararka laysugu gudbin jiray durbaanka waxaa kamid ah dhalashada, geerida, dagaallada, iwm, nooc walbana waxa uu lahaan jiray hab iyo dhawaag u gaar ah oo durbaanka loogu tumo, dadkuna marka ay maqlaan dhawaaqa durbaankaas way ogaan jireen warka uu xambaarsan yahay, hadday noqon lahayd dhalasho, geeri, dagaal, iwm.

Sidoo kale, waxaa jiri jirtay xilli dadku ay warka iskugu gudbin jireen dab la shido. Wararka layskugu gudbin jiray dabka waxaa kamid ah dagaallada, siiba colka isugu baaqaya guul, jab, iwm.

Isgaarsinta warka iyo fariimaha waxa ay maalin kasto la jaanqaadeysay teknoolojiyada. Samuel Morse ayaa soo Telegraph 1837. Heerarka u dambeeya ee isgaarsiinta fariimaha waxaa loo adeegsadaa mobaylada iyo internet-ka.

- **Adeegga Boostada**

Nidaamka boostadu waa nidaam warqad qoraal ah oo ku jirta baqshado ama baakado ay ku jiraan alaabo la geeyo dalka gudihiisa ama dibadda. Wax kasta oo loo diro nidaamka waxa loo yaqaanaa boostada.

Dukumetiyadaas looma oggola in uu akhristo ama furo qofkii loo diray qof aan ahayn. Adeegga boostada waxa uu nogon karaa mid gaar ah ama dawladdu leedahay. Qofka lobo adeegayo waxaa laga qaadaa lacag yar, waxa aana bashqaddisa lagu dhajiyaa istaambo muujinaysa lacag bixinta

Waxqabadka 1aad:

Aniga iyo saaxiibkey waxa aan bakhsadda qad korkeeda ku qoreynaa

Ku: Magaca qofka loo diraayo

L/H: meesha laga helo

Ka: Qofka diraaya

L/H: meesha laga helo

- **Telefoonnada**

Isgaarsiinta telefoonka waa mid ka mid ah kuwa ugu muhiimsan isgaarsiinta. Telefoonka waxaa soo hindisay saynisyahan Alexander Graham Bell sanadkii 187. Inkastoo maanta adeegsigeeda loo bedelayy qaabab kale oo isgaarsiin ah (sida email-ka), isticmaalka taleefanka waa mid ka mid ah hababka ugu caansan ee loo adeegsan karo isgaarsiinta gudaha iyo dibeddaba.

Waxqabadka 2aad:

Waxa aan saaxiibkey la wadaagayaa faa'iidada telefoonku noo leeyahay xagga waxbarshada

- **Adeegsiga Email-ka**

Email waa mid ka mid ah teknoolajiyadda internetka aasaasiga ah. Habka uu adeegsado qof walba oo internetka la leh xirirka marka uu rabo in uu farriin ama dukuminti u diro qof kale waa Email.

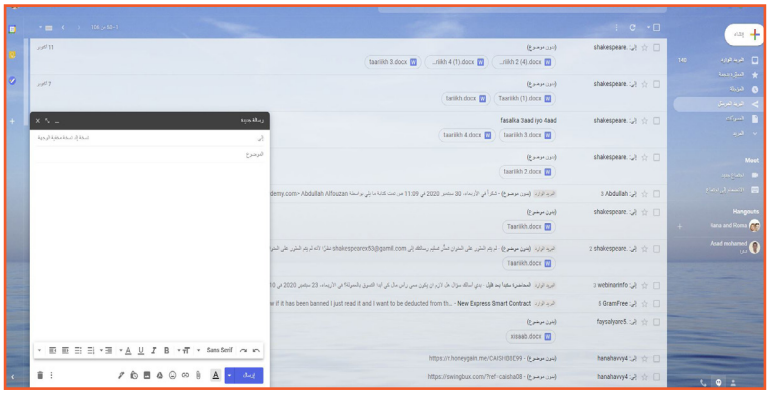
Email-ku Waxa uu kuu Oggolaaneyaa in aad warqad u diri kartid hal qof ama dad badan hal mar.

Email marka aad dirayso waxaa lagama maarmaan ah inaan heysano.

1. Kombiyuutar ama mobile casri ah.

2. Internet.

3. Xisaabta E-mail sida G-mail, Hotmail iwm.



Waxqabadka 3aad:

Waxa aan koox-koox uga doodeynaa waxtarka e-mailka uu u leeyahay:

- Ardeyga.
- Macallinka.
- Maamulaha.
- Ganacsiga.

- **Adeegsiga Internet-ka**

Internet-ka waa hab adduunka oO dhan u furan iney isku dhaafsadaan warka, cilmiga, ganacsiga iwm. Internet waxa uu ka kooban yahay Shabakadda

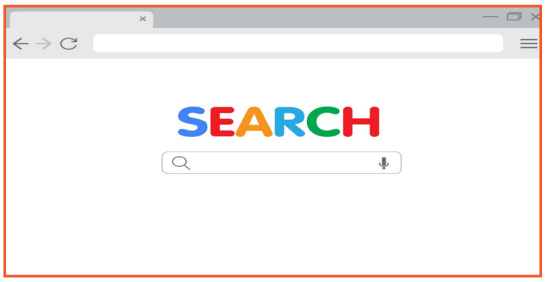
Kumbuyuutarrada (Computer Network). Kuwaasoo xogta isku dhaafsadda habka loo yaqaan internet protocol.

Waxa uuna ka kooban yahey malyuumaad shabakadood (network) sida kuwa jaamacaddaha, ganacsiyada, dowladaha shirkadaha iwm. Kuwaas oo si wadajir ah isku dhaafsada xog kala duwan oo nooc walba leh sida sawirrada, muuqaallada, codadka, iyo qoraallada.

Magaca internet waxa uu ka yimid ereyga interconnection network, oo loo soo gaabiyey internet.

Internet-ku waxa uu noo leeyahay faa'iidooyin kala duwan waxa aana ka mid ah:

1. Cilmi baaris: sida in aad ka raadiso macluumaad aad u baahan tahay
2. Waxbarasho: waxaad ka heli kartaa casharro ah qoraal ama muuqaal ama cod ah.
3. Ganacsiga: Waxaad ku xayeysiin kartaa gancsiga, sidoo kale wax waa lagu kala gadan karaa.
4. Farriimaha oo la isgu diro.
5. Xiriirka baraha bulshada.



Waxqabadka 4aad:

Cilmi baaris: Sidee telefoon u diri karaa aniga oo adeegsanaya interneetka.

3. Teknoolojiyada Tamarta

Tamartu waa kartida hawl lagu qabto. Hawl kasta oo la qabanayo waxa ay u baahan tahay tamar. Isha tamarta ugu weyn dunida waa qorraxda. Guud ahaan tamarta waxaa loo qaybiyaa laba nooc oo kale ah: Tamarta Gurta (Non-Renewable Energy) iyo Tamarta Maaxata (Renewable Energy). Ilaha tamarta waxaa ka mid ah:Tamarta Qorraxda, Tamarta Dabaysha, Tamarta Biyaha, Tamarta Shidaalka, Tamarta Danabka (korontada), Tamarta Kulka, Tamarta Kimikada iyo Tamarta Nukliyeerka.

Qaybtan Teknolojiyadda Tamarta waxa aan ku baranaynaa sida teknoolojiyadu u fududeysay adeegsiyada Tamarta Qorraxda, Tamarta Dabaysha iyo Tamarta Biyaha

- **Tamarta Qorraxda**

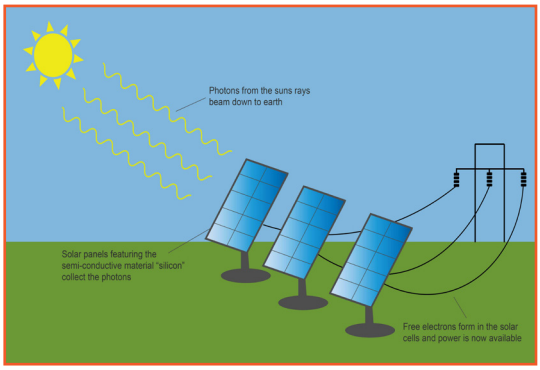
Qorraxdu waa isha ugu weyn ee bani'aadamku, xayawaanka iyo dhirtu ay ka helaan Tamar. Sidee ayey dadku uga faa'ideystaan Tamarta qorraxda?

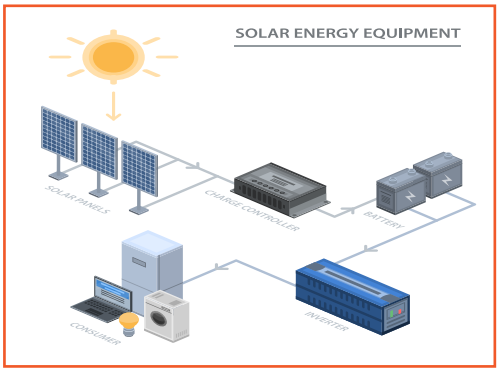
Tamarta qorraxdu waxa ay waxa ay ku soo baxdaa hab kul iyo ilays ah. Tamarta qorraxdu waxa ay kaalin weyn ka qaadataa cunto- sameynta dhirta, bixitaanka dalagyada kala duwan, qallajinta maxsuulka beeraha, sameynta cusbada tamarta biyaha iyo tamarta dabaysha.

Adeegsiga iyo horumarinta teknoolojiyada waxa ay fududeysay ka faa'iideysiga tamarta qorraxda. Waxa aan tusaale u soo qaadan karnaa:

Tamarta llayska (Solar Enegy) Teknoolojiyadaan waxa ay fududeysay in tamarta ilayska qorraxda loo beddelo danab (koronto) laga faa'iideysan karo.

Ilayska qorraxda waxaa loo beddelaa danab (koronto) ayada oo la adeegsanayo qalabka loo yaqaan soollarka (photovoltaic).



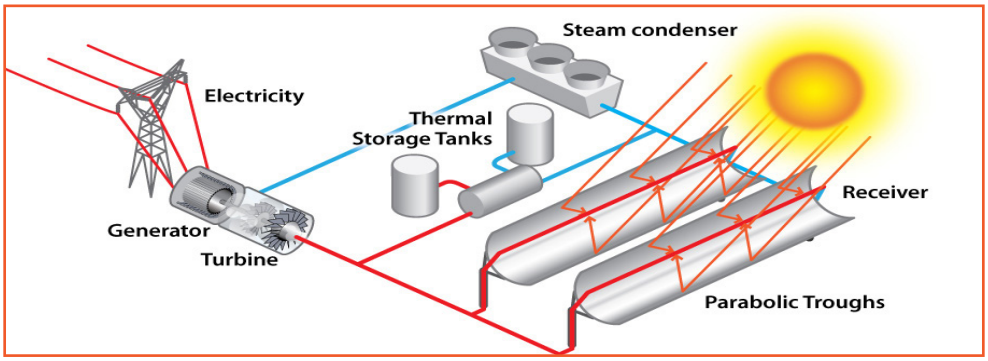


qalabka soolarka waxaa loo adeegsadaa in uu danab (koronto) siiyo meelo kala duwan sida dayax-gacmeedyada, saacadaha, guryaha, dhismayaasha ganacsiga, buuxinta bateriyada iwm.

Tamarta qorraxda waa la keydiyaa si loo adeegsado marka ay qorraxdu dhacdo ama daruuro qariyaan. Hababka loo keydiyo waxaa ka mid ah in lagu keydiyo bateriyo ama marxiyayaal (danab-keydiye) haya tamarta danabka (korontada) si loo adeegsado marka loo baahdo.

Ururinta Tamarta Qorraxda

Teknoolojiyadan waxaa la adeegsadaa kulka qorraxda oo la ururiyo. Bikaacooyin iyo muraayado ayaa lagu aaddiyaa qorraxda, tamarta-noqodka ayaa lagu jeediyaa biyo ku jira dhuumo. Biyuhu markey kululaadaan waxa ay noqdaan uumi wareejiya tarbiinno sabab u noqda dhalinta tamar danab (koronto) ah oo joogto ah.



Waxqabadka 1aad:

Cimli Baaris: Waxa aan soo baarayaa sida Soomaalidu u diyaariso cusbada iyo teknoolojiyada ay isticmaalaan.

Waxqabadka 2aad:

Waxa aan koox-koox uga doodeynaa oo aan soo jeedinaynaa sida soolaradu uga qayb qaataan dhaqaalaha qoyska iyo bulshada.

- **Tamarta Dabaysha**

Tamarta dabaysha waa nooc ka mid ah noocyada tamarta. Tamarta dabayshu waxa ay ka mid tahay tamarta maaxata. Waxaa tamarta dabaysha adeegsan jiray doomaha shiraacyada leh iyo ceelasha leh marwaxadaha wareega.

Dabayshu waa nimco Allaah nagu galladeystay oo mudan loogu mahadiyo. Allaah waxa uu Qur'aanka ku yiri:

قال الله تعالى: ﴿وَمِنْ ءَايَٰتِهِ ٱلْجَوَارِ فِى ٱلْبَحْرِ كَٱلْأَعْلَٰمِ ۝٣٢ إِن يَشَأْ يُسْكِنِ ٱلرِّيحَ فَيَظْلَلْنَ رَوَاكِدَ عَلَىٰ ظَهْرِهِۦٓ ۚ إِنَّ فِى ذَٰلِكَ لَءَايَٰتٍ لِّكُلِّ صَبَّارٍ شَكُورٍ﴾

Horumarka teknoolojiyada waxa ay gaartay in la sameeyo tarbiino u beddela tamar socodka dabayshamakaaniko ah ama tamar danab.

Waxqabadka 3aad:

Waxa aan koox-koox isu dhaafsaneynaa faa'iidooyin kale oo ay leedahay tamarta dabaysha iyo teknoolojiyada looga faaidaysto tamartaas.

- **Tamarta Biyaha**

Tamarta biyaha laga dhaliyo waxa ay ka mid tahay nooca tamarta maaxda. Habab kala duwan ayaa biyaha looga dhaliyaa Tamar danab (koronto). Waxaa ka mid ah: In la dhiso biyo-xireen lagu xannibo biyaha, kadibna loo furo marinno ay biyuhu Xawaare sare ku maraan. Biyahaas xoogga ku socda waxa ay wareejiyaan torbiinno wareejiya danab-dhaliyayaal soo saara tamar danab (koronto).

Biyo xireennada Soomaliya waxaa ka mid ah Biyo-xireenka Balcad oo dhismahiisa ay iska kaashadeen Soomaliya iyo Kuuriyada Woqooyi, waxa aana dhismahiisa la billaabay 1976, waxaa uu leeyahay 13 albaab oo laga xaddido biyo ka gudbaaya biyo-xireenka. Biyo-xireenkan uma diyaarsana in Tamar laga dhaliyo waxaase loogu talagalay in lagu waraabiyo beeraha.

Sawirka: Biyo-xireenka Balcad

Waxqabadka 4aad:

Waxa aan saaxiibkey isla falanqeyneynaa faa'iidooyinka ay leeyahiin biyo-xireennada iyo teknoolojiyada ay isticmaalaan.

Waxqabadka 5aad:

Cilmi Baariis: Waxa aan cilmi baaris ku sameynayaa biyo- xireenkii laga dhisay Soomaaliya xilligii dawladdii kacaanka iyo meelaha ay ku yaallaan iyo teknoolojiyada ay waagaas isticmaaleen.

Gunaanad

Waxa aan casharkaan ku soo baranay:

1. Teknooloojiyadda gaadiidka waxa ay soo martay heerar kala duwan oo hadba la socoto dadaalka aadanaha.
2. Waxaa la hormariyey gaadiidka barriga sida gawaarida, mootooyinka, baaskiilada, kadibna waxa la sii hindisay basas waaweyn iyo tareenno.
3. Gaadiidka badda ujeeddooyin kala duwan ayaa loo sticmaalaa waxa aana kamid ah kalluumeysiga, dalxiiska, akaabka, xamuulka, milateriga iyo cilmi baarista.
4. Adeegsiga diyaaraduhu waxaa ka mid ah xamuul, rakaab, daryeel caafimaad, ciidanka cirka iyo buufinta beeraha
5. Dayax gacmeedka waxaa loo adeegsadaa oo loogu talagalay sahminta hawada, isgaarsiinta, internetka iwm.
6. Waxaa la soo saaray diyaarado aan qofna wadin (darones) oo dhulka laga hago loona adeegsada siyaabo kala duwan sida milateriga, cilmi barista, sawir qaadidda, xamuul, buufinta beeraha iwm.
7. Isgaarsiin waa is dhaafsi xog ay isdhaafsadaan labo qof ama ka badan si isku halayn leh.
8. Nidaamka boostadu waa nidaam warqad qoraal ah oo ku jirta baqshado ama baakado ay ku jiraan alaabo la geeyaa dalka gudihiisa ama dibadda. Nidaamkaas waxaa loo yaqaanaa boostada.

9. Telefoonka waxaa soo hidisay saynisyahan Alexander Graham Bell sanadkii 1876.

10. Email ku waxa uu kuu oggolaaneyaa in aad warqad u diri kartid hal gof ama dad badan hal mar.

11. Internet waa hab adduunka oo dhan u furan iney isku dhaafsadaan wararka, cilmiga, ganacsiga iwm.

12. Guud ahaan tamarta waxaa loo qaybiyaa laba nooc oo kale ah: Tamarta gurta (Non-Renewable Energy) iyo Tamarta Maaxata (Renewable Energy).

13. llaha tamarta waxaa ka mid ah: Tamarta Qorraxda, Tamarta Dabaysha, Tamarta Biyaha, Tamarta Shidaalk-Tamarta Danabka(korontada), Tamarta Kulka, TamartaKimikada iyo Tamarta Nukliyeerka.

14. Tamarta dabaysha waxaa adeegsada doomaha shiraacyada iyo ceelasha leh marwaxadaha wareega.

15. Habab kala duwan ayaa biyaha looga dhaliyaa tamar danab (koronto) waxa aana ka mid ah biyo-xireennada

16. Soomaaliya waxa ay leedahay biyo-xireenno

Layli

1. Waa maxay faraqa u dhexeeya jidka tareenka iyo kan baabuurta?
2. Cilmi Baaris: Sheeg nabigii ugu horreeyey ee sameeyay doon?
3. Wax yar ka qor diyaaradaha dhulka laga hago oo uusan qof saarneyn (drones),
4. Isbarbardhig xagga dhakhsaha iyo waxtarka ee diyaaradaha iyo baabuurta.
5. Cilmi Baaris: Sheeg adkaarta la akhriyo marka aad gaadiid raaceyso.
6. Cilmi Baaris: wax ka qor faa'iidada iyo dhibaatooyinka ay leeyihiin Bajaajyada
7. Waxaa jira shimbir Qur'aanka lagu sheegay oo qaaday farrin, waxaad sheegtaa:
   - Magaca Shimbirka.
   - Suuradda lagu sheegay iyo aayadda.
   - Farrinta yaa diray.
   - Farrinta yaa loo diray.
8. Waa maxay adeegga boosto?
9. Sheeg saynisyahankii hindisay telefoonka
10. Maxaa lagama maarmaanu ah si aan u diro email?
11. Qor afar nooc oo ka mid ah noocyada tamarta.
12. Sidee ayey reer miyigu uga faa'iideystaan tamarta qorraxda?
13. Sidee ayey cimiladu saameyn ugu leedahay Tamarta qorraxdu?
14. Doomaha shiraaca leh waxa ay adeegsadaan tamarta dabaysha. Waa

maxay nooca tamarta oo ay adeegsadaan doomaha aan shiraaca lahayn iyo maraakiibta?

15. Sharax habka biyaha wabiyada looga soo saaro Tamar danab (koronto)?

16. Cilmi Baaris: Qor warbxin ku saabsan mashruucii biyo-xireenkii Faanoole adiga oo ka qoraya: Meesha laga sameeyey Sanadaha uu qaatay dhammeystirkiisa Ma laga faa'iidetsay? Dawladdee la fulisay mashruucaas dawladdii Soomaaliya.

17. Maxay ku kala duwan yihiin tamarta qorraxda iyo tamarta dabaysha?

18. Maxay taraan bikaacooyinka iyo muraayadaha marka tamarta qorraxda loo adeegsado in biyo loo beddelo uumi ka dibna danab(koronto).

Su'aal: Waa maxay kaalinta teknoolojiyadu ka qaadato sugidda amniga garoomada diyaaradaha ee caalamka?

Ujeedooyinka Casharka

Dhammaadka casharka Bare-ardaydu waxa ay awood u yeelanayaan in ay:

1. Tixgeliyaan nabadda dalka iyo dadka
2. Sharxi karaan qalabka ilaalinta nabadgelyada
3. Faahfaahin karaan saameynta nabadgelyadu ku leedahay nolosha Qofka iyo bulshada.

Teknoolojiyada iyo Nabadda

Nabadda iyo amnigu waa baahi uu qof kasta u baahan yahay. Waa xil saaran qof kasta oo muwaadin ah in uu ilaaliyo nabadda. Haddii qof kasta xilkaas qaado, waxaa la helayaa bulsho nabad ku nool iyo dal nabad ah.

Nabi Ibraahim (CS) waxa uu Allaah ka baryey in magaalada Maka uu ka dhiqo .balad aamin ah

قال الله تعالى: ﴿وَإِذْ قَالَ إِبْرَٰهِيمُ رَبِّ ٱجْعَلْ هَٰذَا ٱلْبَلَدَ ءَامِنًا وَٱجْنُبْنِى وَبَنِىَّ أَن نَّعْبُدَ ٱلْأَصْنَامَ﴾

(Xus) waqti uu Nabi Ibraahim yiri: Rabbiyow ka dhig baladkaan (Maka) mid nabad ah).

Aadanuhu waxa uu samaystay aalado kala duwan si uu u ilaaliyo nabadgalyada qofka, bulshada iyo deegaanka.

Qaybtan waxa aan ku baraneynaa teknoolojiyada bani'aadamku adeeqsado si uu u ogaado, ugana hortago dhib waxyaabaha dhalin karo in nabadda iyo amniga dhib Soo gaaro.

- Ahmiyadda Nabadda.
- Kameerooyinka ilaalada.
- Qalabka baaro birta.
- Baaridda garooomada diyaaradaha.

- **Ahmiyadda Nabadda**

Waa maxay Nabad? Yaan nabad u baahneyn? Yaa ka maarmo in uu nabad uqu noolaado xaafaddiisa, degmadiisa, gobolkiisa iyo waddankiisa?

Nabad waa xasillooni, isjeceyl, isfaham, wada- noolaasho iyo in laga nabagalo carrabkaada iyo gacantaada. Nabigu (CSW) waxa uu xadiis ku yiri

"***Qofka muslimka ah waa qof laga nabadgalo carrabkiisa iyo gacantisa***"

Bulsho nabad ku nool waa bulsho isku duuban, wada jirta, isku faraxsan, iskaashi uu ka dhexeeyo. Waa bulsho mushkiladaheeda ku saxda wada hadal iyo isfaham. Bulshada nabadda ku nool kuma xalliso khilaafka dhexmara qab iyo dagaal.

Bulshada nabadda jecel, qof kasta waxa uu mas'uul ka yahay ilaalinta nabadda, ka fogaanta colaadda iyo wax kasta oo nabadgalyo xumo keeni Kara.

Waxqabadka 1aad:

Waxa aan koox-koox uga doodeynaa waxyaalaha keeni kara amni-darro iyo iyadoo la adeegsanyo teknoolojiyada looga hortagi karo arrimahaas.

Waxqabadka 2aad:

Cilmi baaris

Waxa aan baarayaa su'aashaan jawaabteeda:

Goobaha waddankeenna ay nabadgalyo ka jirto side side ayey teknoolojiyadu uga qayb qaadatay?

- **Kameerooyinka ilaalada**

Kameerooyinka ilaalada waxaa loogu talagalay in lagu ilaaliyo guryaha iyo goobaha bulshadu ku kulanto sida dugsiyada, isbitaalada, hoteellada iwm.

Kameerooyinka ilaalada waxaa lagu dhajiyaa bannaanka hore ee dhismayaasha, waddooyinka, xafiisyada dhexdooda, bangiyada, garoomada diyaaradaha iwm.

Ujeeddooyinka loo isticmaalo waxaa ka mid in

1. In lala socdo dhaqdhaqaaqa tuugada iyo burcadda isku dayda in ay dhacaan bangiyada, xawaaladaha, goobaha waaweyn ee ganacsiga iwm.
2. In lala socdo dhacdooyinka ka dhaca waddooyinka sida shilalka, khilaafka nidaamka waddooyinka iwm.
3. In lala socdo guud ah nabadgalyo iyo bad-qabka shacabka

Waxqabadka 3aad:

Cilmi Baaris

Kaamirooyinka ilaalada waxa ay faa'iidooyinka ka sokow leeyihiin dhib, waxa aan soo diyaarinaynaa oo soo bandhigeyna aniga iyo saaxiibkeyga dhibaatada ay leeyihiin kameerooyinka ilaalada.

Waxqabadka 4aad:

Waxa aan saaxiibkey la wadaagayaa su'aashan: Waa maxay nooca xogta ay kameerooyinka ilaaladu kaydiyaan?

- **Qalabka lagu baaro birta**

Waa qalab looqu talagalay in lagu baaro qofka agabka uu wato. Qalabkan waxa uu sheegaa birta sida furaha, saacadda, walxaha birta ka samaysan ee qarxa iwm, waxa uuna bixiyaa jabaq (cod) sheegaya in walax bir ah uu wato ama ay ku jirto dharka qofka sida jeebabka iwm.

Qofku ma gudbo ilaa laga hubiyo in uusan wax dhib ah u keeni karin dhismaha uu rabo in uu galo.

Arrintaas waxa ay waxtar weyn u fahay dhammaanteen, waxa aana habboon in aadan diidin in laqu baaro oo dhaqan wanaagsan aan kula dhaqanno baarayaasha.

Qalabka waxaa wax ku baara ilaalada jooga albaabada laga soo galo dhismaha la ilaalinayo, sida hoteellada, bangiyada, xawaaladaha, wasaaradaha, xeryaha ciidamada iwm.

Waxqabadka 5aad:

Cilmi Baaris

Waxaa soo qorayaa dhibaatada keento nabad la'aanta iyo amni-darrada marka aan la isticmaalin teknoolojiyada casriga ah.

Waxqabadka 6aad:

Waxa aan ka doodaynaa su'aashaan:

Xasan oo raba in uu galo hoteel ayaa lagu baaray galabka baaridda birta, dhammaan wixii jeebkiisa ku jiray wuu soo bixiyey, xataa suunka iyo kabaha wuu bixiyey, haddana qalabkii waxa uu bixinaya jabaq muujinaysa in uu bir wato. Xasan waxa uu yiri anigu wax kale oo bir ay ku jirto ma Wato. Ka feker oo sheeg waxyaabaha sababi kara in qalabka baaristu weli digiintaas bixiyo?

- **Baarista Garoomada Diyaaradaha**

Si loo ilaaliyo nabadgalyada garoomada diyaaradaha, bad-qabka diyaaradda iyo rakaabka waxaa la adeegsadaa aalado kala duwan oo lagu baaro boorsooyinka, xamuulka, alaabta ay Wataan rakaabka iyo rakaabka laftiisa.

Sawirrada sare waxaa ka muuqda qalabka laqu baaro boorsooyinka iyo mid lagu baaro qofka oo uu dhexmarayo. Qalabkaas waxa ay bixiyaan jabaq digniin ah. Qalabkaas waxa uu yaallaa meelaha laga qalo garoomada. Adiga waligaa ma aragtey?

Waxaa jira aalad kale oo lagu baaro baabuurta oo muraayad wadata. Waxa ay leedahay gacan dheer oo meel la qabsado leh. Waxaa la geliyaa baabuurka hoostiisa si loo fiiriyo wax dhib keeni kara in baabuur hoos uga dheggan yahay.

Waxqabadka 1aad:

Saaxiibkey waxa aan weydiinayaa sidee ayey ku dhacdaa in diyaarad la afduubo maadaamo la baaro rakaabkii iyo alaabtiiba?

Yaa ka mas' uul ah amnidarradaas?

Gunaanad

Waxa aan ku soo bartay cutubkaan:

1. In nabaddu ay muhiim u tahay qof kasta oo nabad la aan ay tahay nolol la'aan.
2. In mushkiladaha laqu xalliyo wadahal iyo isfaham ee aan dagaal wax laqu xallin.
3. Waxaa jira aalado kala duwan oo lagu baaro waxyaalaha dhibka keeni kara, waxa aana ka mid ah:
   - Kameerooyinka ilaalada oo lagu xiro dhismooyinka
   - Qalabka lagu baara birta oo lagu baaro qofka korkiisa
   - Qalabka baaritaanka garoomada diyaaradaha oo lagu baaro qofka, boorsooyinka iyo xamuulka.
   - Qalabka lagu baaro baaruurta oo la geliyo gaariga hoostiisa.

Layli

Ka jawaab su'aalaha soo socda

1. Qor shan arrimood oo ka qayb qaata nabadda iyo amniga dalka.
2. Akhri dhacdadaan, kana jawaab su'aalaha:

- Nin ayaa waxa uu tagey bangi, Waxa uuna ka qaatay lacag ku jirtay xisaabtiisa. Bil kadib waxa uu ku dooday in uusan asagu qaadan lacagtaas. Bankigii waxa ay dib igu noqdeen kaamaradii duubtay maalintii iyo saacaddii uu qaatay. Waxaa loo yeeray ninkii, waxa aana la tusay muuqaal muujinaya asaga oo lacagtii qaadanaya oo tirsanaya. Ninkii sidaa ayuu ku qancay oo wuu aqbalay in uu lacagtu asagu uu qaatay".

b. Maxaa ka faa'iideysan karnaa dhacdadaan?

t. Waa maxay nooca xogta ay duubtay Kaamaradu?

j. Sidee lagu ogaaday maalinta iyo saacadda uu ninku lacagta qaatay?

1. Haddii uu saaxiibkaa furto hotel, maxaa kula tali lahayd si loo ilaaliya nabadgalyada hoteelka? Kala tali qalabka lagu baarayo:

- Dadka
- Baabuurta
- Bannaanka iyo qudaha hoteelka.

Qiimaynta Cutubka

Ka jawaab su'aalahan:

1. Qeex ereyga 'teknolojiya', sharax koobanna ka qor heerarka teknoolojiyada soo martay?
2. Falanqee sida ay teknoolajiyada beeraha isbeddalka ugu sameysay dhulka wax lagu beerayo iyo sida wax loo beerto
3. Faallo kooban ka qor sida Teknolojiyaddu wax uga beddeshay waxbarshada ardayga iyo waxdhigista baraha
4. Sharrax sida teknoolojiyadu wax uga beddeshay waxdhigista baraha.
5. Qoraal kooban ku muuji sida teknoolojiyadu u horumarisay kaydinta xogta dugsiga (Arday, macallin, shaqaale, agab iwm)
6. Sharax guud ka bixi heerarka teknoolojiyada caafimaadka
7. Kala saar farqiga u dhaxeeyo gaadiidka barriga iyo kan biyaha
8. Isbarbar dhig ku samee isticmaalka isgaarsiinta ee Boostada iyo Teleefannada fiilada leh iyo isticmaalka casriga ah ee isgaarsiinta Teleefanada gacanta iyo Internetka iwm.
9. Faahfaahin ka bixi adeegsiga teknoolojiyada loo adeegsado tamarta qorraxda
10. Sheeg oo sharrax qaybo kala duwan oo guud ahaan la xiriira adeegsiga Teknoolojiyada ee howlaha sugidda nabadda.

Ujeeddooyinka

Dhammaadka casharkaan bare-ardaydu waxa uu awood u yeelanayaan in ay:

1. Fahmo xiriirka ka dhexeeya teknoolojiyadda iyo diinta.
2. Ogaado saamaynta togan iyo midda taban ee teknoolojiyaddu ku yeelatay Islaamka.
3. Sharxi karo sida loo isticmaalo teknoolojiyadda si waafaqsan shareecada Islaamka.
4. Talooyin ka bixin karo sida looga faa'iideysan karo teknoolojiyadda si wanaagsan oo diinta waafaqsan.

Hordhac

Teknoolojiyadda waa qeyb aan laga maarmin nolosha maanta. Waxay saamayn ku yeelatay dhammaan dhinacyada bulshada, gaar ahaan habka aan u noolnahay, wax u baranno, una wada xiriiro. Islaamka oo ah diin dhiirrigelisa cilmiga, horumarka, iyo waxtarka bulshada, waxa ay mudnaan siinaysaa adeegsiga tiknoolojiyadda – haddii si wanaagsan oo xalaal ah loo isticmaalo.

Casharkani wuxuu inoo ifinayaa sida ay teknoolojiyaddu uga caawin karto faafinta iyo barashada diinta Islaamka, iyo sidoo kale digniinta laga bixinayo isticmaalka khaldan ee laga yaabo inuu diinta ka fogeeyo qofka Muslimka ah.

Teknoolojiyadda iyo Diinta:

Teknoolojiyaddu waa qeyb muhiim ah oo ka mid noqotay nolosha bani'aadamka maanta. Islaamka oo ah diin dhammeystiran waxa uu dhiirrigelinayaa horumarka iyo helidda cilmiga. Teknoolojiyaddu waxay si weyn ugu adeegtay Islaamka, sida:

- Faafinta diinta (daacwa) adigoo adeegsanaya baraha bulshada, website-yada, iyo barnaamijyada (apps) sida Qur'an apps.

- Barashada diinta oo si fudud loogu helayo kutubta, muxaadarooyinka, tafsiirka, iyo casharro diini ah oo muuqaal iyo maqalba leh.
- Jadwalka salaadaha, xilliyada soonka, iyo jihada qiblada oo lagu ogaado mobile-ka.
- Sahlidda xisaabaadka sadaqada, zakaada, iyo hawlaha samafalka.

Laakiin sidoo kale, teknoolojiyadda waxay leedahay halis haddii aan si sax ah loo isticmaalin, sida:

- In wakhti lagu lumiyo wax aan faa'iido lahayn.
- In laga daaho salaadda ama cibaadada.
- In la daawado ama la akhriyo waxyaabo aan la jaanqaadi karin diinta Islaamka.

Haddaba, qof Muslim ah waa inuu adeegsadaa teknoolojiyadda si uu u xoojiyo xiriirka uu la leeyahay Alle, u barto una baro diintiisa, ugana fogaado waxyaabaha khaldan.

Waxqabadka 1aad: Dood Kooxeed

Mawduuca: "Teknoolojiyaddu ma u adeegtaa diinta mise way ka mashqulisaa?"

- Ardayda waxaa loo kala saaraa laba koox.
- Mid waxay difaacayaan in teknoolojiyaddu faa'iido u leedahay diinta.
- Kooxda kale waxay sheegayaan in ay diinta ka mashquliso dad badan.
- Dood kadib, macallinku wuxuu gunaanad ka bixiyaa labada dhinac.

Waxqabadka 2aad: Tusaale raad-raac ah

- Arday kastaa wuxuu qoraal kooban ka sameeyaa habka uu teknoolojiyaddu uga faa'iideystay dhinaca barashada, ku dhaqanka iyo faafinta diinta.
- Tusaale ahaan: "Sideen Qur'aanka uga akhriyay app?", "Muxaadaro intee le'eg ayaan dhageystay toddobaadkan?", iwm.
- Qoraallada waxaa lala wadaagayaa fasalka.

***Waxqabadka 3aad:* Raadinta barnaamijyada (Apps) Diini ah**

- Ardaydu waxay baarayaan ugu yaraan 3 app diimeed (tusaale: Quran Tabsira, Muslim Pro, Quran Majeed, iQibla, Tarteel) iyo bogagga duruusta diiniga waqafka ah sida www.nasiixa.com |iwm.
- Waxay qorayaan magaca app-ka ama bogga, shaqadiisa, iyo sida uu Muslimiinta u anfaco.
- Waxay soo bandhigayaan natiijada ay heleen.

Waxqabadka 4aad: Samee Jadwal Iskaashi

- Koox walba waxay sameyneysaa jadwal toddobaadle ah oo ah: "Sidee teknoolojiyadda loogu adeegsan karaa cibaado maalmeedka qofka?"
- Jadwalka wuxuu ka koobnaan karaa: akhriska Qur'aanka, dhageysiga tafsiirka, Axaadiista, fiqiga, muxaadaro, ducooyin barasho, iwm.

Gunaanad

Casharkan waxa aan ku soo barannay

Waxaan ogaanay in teknoolojiyadda ay leedahay saameyn togan oo weyn oo lagu horumarin karo cibaadada, barashada diinta, iyo gaarsiinta fariinta Islaamka meel kasta oo adduunka ah. Isla markaana, waxay leedahay saameyn taban haddii si khaldan loo isticmaalo. Muslimku waa inuu noqdaa qof dheellitiran, oo ka faa'iid-eysta teknoolojiyadda si uu u xoojiyo xiriirka uu la leeyahay Alle, una adeegsado cibaado, barasho, iyo samafal inataba.

Ugu dambeyn, waxaa muhiim ah in aan si miyir leh u adeegsanno teknoolojiyadda, una adeegsano sida ay diinteena suuban ina barayso – si waxtar leh, oo ka faa'iiday-si iyo dhowris waqti leh, sidoo kalena waafaqsan akhlaaqda Islaamka.

Layli

1. **Teknoolojiyaddu maxay tahay? Sidee ayey nolosha Muslimka ugu faa'iideysay?**
2. **Sheeg labo (2) siyaabood oo aad uga faa'iideysatay teknoolojiyadda xagga diinta.**
3. **Waa maxay halista ka dhalan karta isticmaalka khaldan ee teknoolojiyadda?**
4. **Sidee mobile-ku u fududeeyey barashada Qur'aanka iyo axaadiista?**
5. **Sheeg hal website ama app diini ah oo aad taqaan, maxaase looga faa'iidayaa?**
6. **Waa maxay mas'uuliyadda Muslimka marka uu adeegsanayo baraha bulshada?**
7. **Sidee teknoolojiyadda uga caawin kartaa Muslimka inuu waqtigiisa maareeyo si haboon?**

Ujeeddooyinka

Dhammaadka casharkaan bare-ardaydu waxa uu awood u yeelanayaan in uu:

1. Gartaa ardayda baahiyaha gaarka ah qaba iyo noocyadooda.
2. Si qoto dheer u sharaxo agabka teknoolojiyadda ee loo adeegsado wax-barashada ardayda leh baahiyo gaar ah.
3. U kala saaro agabka teknoolojiyadeed noocyadooda iyadoo la eegayo nooca naafonimada.
4. Fahmo sida qalabkani u beddelo nolosha ardayda baahiyaha gaarka ah qaba.
5. Garto doorka macallinka ee hirgelinta iyo kormeerka isticmaalka qalabkan.
6. Tijaabiyo una diyaar garoobo in si xirfad leh loogu adeegsado fasalka.

Ardayda Qabta Baahiyaha Gaarka ah

Ardayda qabta **baahiyaha gaarka ah** waa carruur ama dhallinyaro leh naafonimo jireed, dareeme, maskaxeed, ama mid bulsho oo saameyn ku yeelata sida ay wax u bartaan, ula xiriiraan dadka kale, ama uga qaybqaataan waxbarashada caadiga ah.

Baahiyahaasi waxay noqon karaan kuwo:

- **Jirka ah** (tusaale: curyaannimo ama dhaqdhaqaaq xaddidan),
- **Aragga ama maqalka ah** (tusaale: indho la'aan ama dhago la'aan),
- **Maskaxda ah** (tusaale: xannuunada barashada sida dyslexia ama autism),
- **Bulsho iyo dareen ah** (tusaale: ardayda leh culeysyo la xiriira xidhiidhka bulshada ama dabeecadda).

Ardayda noocan ah waxay u baahan yihiin taageerooyin gaar ah sida agab teknoo-lojiyadeed, manhaj habeysan, iyo faham iyo dulqaad ka imanaya macallimiinta iyo asxaabtooda si ay ugu guuleystaan waxbarashadooda.

1. *Waa maxay Teknoolojiyadda Taageerta Waxbarashada Gaarka ah?*

Teknooloojiyaddu ma ahan oo kaliya kombiyuutarro iyo internet; waxay kaloo tahay qalab loo sameeyay si gaar ah si ay uga saacido ardayda leh baahiyaha wax-barasho ee gaarka ah inay helaan fursad la mid ah ardayda kale. Waxay ka caawisaa fahamka, isdhexgalka iyo helidda xog si ku habboon baahidooda.

2. *Noocyada Agabka Teknoolojiyadda ee Loo Adeegsado:*

Nooca Naa-fonimada	Agab Teknoolojiyadeed
Naafada Arag-ga	Screen readers, Braille keyboards, OCR readers
Naafada Ma-qalka	Hearing aids, captioning apps, FM systems
Naafada Dh-aqdhaqaaqa	Switch devices, adaptive mouse/keyboards
Naafada Fa-hamka	AAC apps, visual schedules, learning software

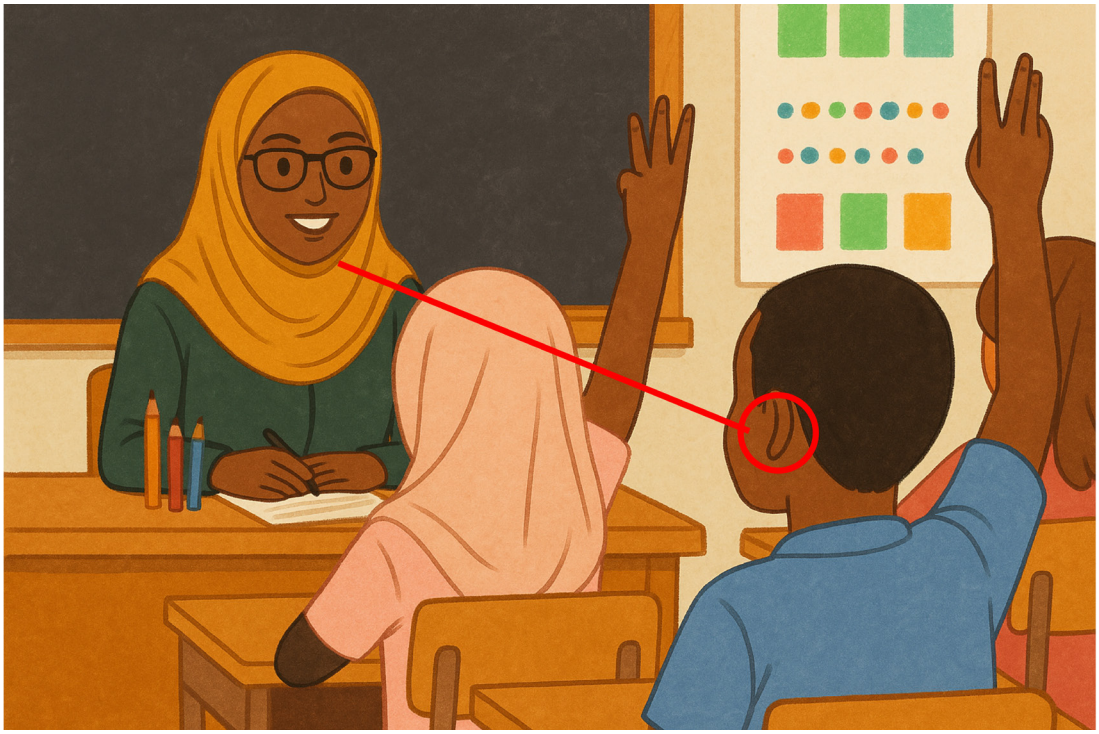
3. *Sawirro Agabka Teknoolajiyada ee Ardayda Baahiyaha Gaarka ah Qaba*

Sawirka 1: *Braille Display* sahlaya in ardaygu akhriyo buug fasalka. Qalabkani wuxuu u beddelaa qoraalka dhijitaalka ah ee kombiyuutarka luqadda Braille si uu u taabto.

Faa'iido: Wuxuu siinayaa ardayda indhaha la' fursad ay si madax-bannaan wax ugu akhriyaan.

Sawirka 2: Qalab *FM System* ah oo macallin xiran yahay si codkiisa si fiican loogu maqlo.

Faa'iido: Wuxuu si gaar ah uga caawiyaa ardayda maqalkoodu liito inay si cad u maqlaan macallinka, gaar ahaan meelaha buuqa leh.



Sawirka 3: ***AAC app*** **oo tablet ku jira (TouchChat by Saltillo).**

Faa'iidooyinka Agabka Teknoolojiyadda

1. **Xorriyad waxbarasho**: Ardaydu waxay helaan awood ay si madax-bannaan wax ugu bartaan.

2. **Waxqabad sare**: Waxay kordhisaa kalsoonida ardayga iyo kartidiisa inuu la jaanqaado fasalka.

3. **Isdhexgalka Fasalka**: Ardaydu kama fogaadaan saaxiibadood ee waxay la midoobaan ardayda kale waxayna helaan hab waxbarasho isku mid ah.

4. **Fududeynta Macallinka**: Waxay siisaa macallinka fursad uu ugu habeeyo waxbarashada baahida arday kasta.

Talooyin Dheeraad ah oo Macallimiinta loogu Talagalay:

- **Qiimee baahida ardayga** ka hor inta aanad dooran qalab.
- **Ka qayb geli tababaro** la xiriira agabka cusub ee teknoolojiyadda.
- **La shaqee waalidiinta** si ardaygu u isticmaalo qalabka fasalka iyo guriga labadaba.
- **Diiwaangeli horumarka ardayga** si loo qiimeeyo saameynta qalabka la isticmaalay.

Gabagabo:

Teknoolojiyadda casriga ahi waxay bedeshay sida wax loo baro ardayda baahiyaha gaarka ah qaba. Agabkan waxay horseedaan.

- Isdhexgal waxbarasho oo la siman ardayda kale.
- Kalsooni buuxda oo ardaydu ku helaan awooddooda.
- Kordhinta fursadaha waxbarasho iyada oo la dhimayo caqabadaha jira.

Tusaale ahaan, arday aan arag lahayn ayaa maanta qoraal u akhrin kara taleefoon ama computer; arday aan si fiican u hadlin ayaa si cod ah u cabbiri kara fikirkiisa iyadoo la adeegsanayo qalabyo AAC ah.

Macallimiintu waa inay noqdaan dad u diyaarsan inay aqoon u yeeshaan, adeegsadaan, oo kor u qaadaan agabkan fasalka, si loo gaaro waxbarasho loo siman yahay, loogana guuro nidaamka dhaqameed ee xadidan.

Layli

1. Qalabkee ayaad dooran lahayd haddii ardaygu leeyahay dhibaato aragga ah? Maxaadse u dooratay?
2. Sidee buu FM system uga duwan yahay hearing aid caadi ah?
3. Sharax sida uu *Speech-to-Text* software u caawin karo ardayda aan awoodin qorista.
4. Halkee laga bilaabaa marka la rabo in loo helo arday qalab ku habboon baahidiisa?
5. Tusaalayn xaalad fasalka ah, oo aad agab gaar ah ugu adeegsato arday naafonimo leh.

Cutubka 2aad: Hordhaca Kombiyuutarka

Hordhac

Kombiyuutarradu meel walba way yaallaan: goobaha shaqada, xarumaha waxbarashada, iyo guryaha waxa aana loo adeegsada siyaabo kala duwan. Dadku waxa ay adeegsadaan dhammaan noocyada iyo cabbirrada kombiyuutarrada sababo kala duwan iyo meelo kala duwan. Halka kombiyuutarrada qaar waxaa la saaraa miiska dushiisa (desktop computers), kuwana gacanta ayaa lagu qaataa. Qalabka mobilada sida taleefannada gacanta, inta badan waxaa lagu tiriyaa kombiyuutarrada.

Kombiyuutarradu waa qalab aasaasi u ah dhamaan adeegyada la xariira nolosha oo ay ugu horeyso isgaarsiinta, taasoo ay balaayiin dad ah kuwada xariiraan. Macaamiisha waxa ay adeegsadaan kombiyuutarrada si ay ula jaanqaadaan ganacsiyada, shaqaalaha kale iyo macaamiisha, ardayda iyo macallimiinta, xubnaha qoyska, shaqaalaha milatariga, asxaabta iyo dhamaan qeybaha kale ee bulshada.

Intaas waxaa dheer dirista qoraalada fudud, wadaagista sawirada, sawir gacmeedyada, dukumentiyada, kalandarka, jaraaidyada (joornaalada), maqal iyo muqaal. Maadaama teknoolajiyadu ay sii hormareyso kombiyuutarada waxa ay ka mid noqdeen nolol maalmeedka. Sidaa darteed, qaar badan dadku waxa ay aaminsan yihiin in adeegsiga kombiyuutarka uu muhiim u yahay guusha iyo horumarka adduunka ee maanta.

Ujeedooyinka Cutubka

Dhammaadka cutubkan bare-ardaydu waxa ay awood u yeelanayaan in ay:

1. Sheegi karaan waa maxay kombiyuutar
2. Tusaale ka bixin karaan adeegsiga kombiyuutarka iyo ahmiyaddiisa

3. Sharaxi karaan afarta hawlgal ee aasaasiga ah ee kombiyuutarka: soo galinta (input), Habaynta (Process), wax soo saarka (output), iyo kaydinta (Storage).
4. Kala garan karaa qalabka kala duwan ee loo adeegsado afarta howlgal ee asaasiga ee kombiyuutarka
5. Qiimayn karaan faa'iidooyinka iyo khasaaraha ay isticmaalayaashu kala kulmaan kumbiyuutarka.
6. 1. Sharaxaad kooban ka bixin karaa waxa ay tahay looxadda hooyada (Motherboardka) iyo labadeeda qaybood ee ugu muhiimsan
7. Sharax guud ka bixiyaan noocyada kombiyuutarka
8. Xiriir ka dhaxaysiin karaan tayada shaqo ee kombiyuutarka iyo qaab-dhismeedkiisa
9. Sharaxaad ka bixin karaan qeybaha kala duwan ee Operating systems-ka.
10. Faahfaahin ka bixin kara internet-ka iyo siday shabadakada internet-ka u shaqayso.
11. Gartaan luqadaha kala duwan ee computerka (programming languages) iyo saamaynta ay teknoloojiyada ku leeyihiin.

Tusmada Cutubka

Cutubkaan waxaanuu ka kooban yahay casharada soo socda:

Casharka 1aad: Qeexidda erayga kombiyuutarka, iyo afarta howlood ee aasaasiga ee kombiyuutarka.

Casharka 2aad: Noocyada, cabbirka, iyo shaqooyinka kumbuyuutarrada

Casharka 3aad: Qeybaha Software-ka iyo kordhinta (shubashada) barnaamijyada ee kombiyuutarka

Casharka 4aad: Adeegsiga Kombiyuurtarka

Habka Waxbaridda

1. **Sharaxaad**
   Macallinku wuxuu si kooban oo cad u sharxayaa casharka, isagoo diiradda saaraya muhiimadda iyo adeegsiga teknoolojiyada.

2. **Dood ku saabsan ahmiyadda iyo adeegsiga teknoolojiyada**
   Ardayda waxaa la gelinayaa dood furan si ay ugu falanqeeyaan muhiimadda teknoolojiyada iyo sida ay saameyn ugu leedahay noloshooda maalinlaha ah iyo waxbarashadooda.

3. **Koox-koox iskula weydiiya uguna dooda mawduuca**
   Ardayda waxaa loo kala qaybinayaa koox-koox si ay isugu weydiiyaan su'aalo la xiriira mawduuca ayna ugu doodaan si is-dhaafsi fikir iyo wada shaqeyn u dhacdo.

4. **Akhrinta buugaag dheeraad ah**
   Ardayda waxaa lagu dhiirigelinayaa inay akhriyaan buugaag dheeraad ah ama qoraallo la xiriira teknoolojiyada si ay u helaan aragtiyo dheeraad ah.

5. **Su'aalo iyo Jawaabo**
   Waxaa la qaadanayaa waqti loogu talagalay su'aalo iyo jawaabo si loo xoojiyo fahamka ardayda iyo in la saxo wax kasta oo mugdi ku jiro.

6. **Tusin (Practical)**
   Waxaa la sameynayaa tusin ama hawl-galyo toos ah (practical activity), sida isticmaalka qalab ama barnaamijyo teknoolojiyadeed si ardaydu ugu arkaan si ficil ah.

7. **Muuqaalo**
   Waxaa la daawanayaa muuqaallo la xiriira teknoolojiyada si kor loogu qaado xiisaha ardayda iyo fahamka muuqaal ahaan.

Casharka 1aad Qeexidda erayga kombiyuutarka, iyo afarta howlood ee aasaasiga ee kombiyuutarka

Su'aal: Goorma ayay ahayd markii kuugu horraysay ee aad maqashay Kombiyuutar? Maxaa kuu sawirnaa intaadan isticmaalin xagga adeegsiga iyo waxtarka?

Ujeeddooyinka Casharka

Dhammaadka casharkan bare-ardaydu waxa ay awood u yeelanayaan in ay:

1. Qeexi karaan waa maxay kombiyuutar
2. Tusaale ka bixin karaan adeegsiga kombiyuutarka
3. Sharxi karaan ahmiyadda kombiyuutarka u leeyahay nolosha
4. Sharaxi karaan afarta hawlgal ee aasaasiga ah ee kombiyuutarka: soo galinta (input), Habaynta (Process), wax soo saarka (output), iyo kaydinta (Storage).
5. Kala garan karaa qalabka kala duwan ee loo adeegsado afarta howlgal ee asaasiga ee kombiyuutarka
6. Qiimayn karaan faa'iidooyinka iyo khasaaraha ay isticmaalayaashu kala kulmaan kumbiyuutarka.
7. Sharaxaad kooban ka bixin karaa waxa ay tahay looxadda hooyada (Motherboardka) iyo labadeeda qaybood ee waawayn

b. Waa maxay kombiyuutar?

Erayga "Computer" waxa uu ka yimid erayga "compute" oo macnahiisu yahay xisaabi. Kombiyuutarka waa aalad elektaroonig ah, oo keydisa isla markaa habeysa (processes) xogta si loo helo macluumaad macno leh.

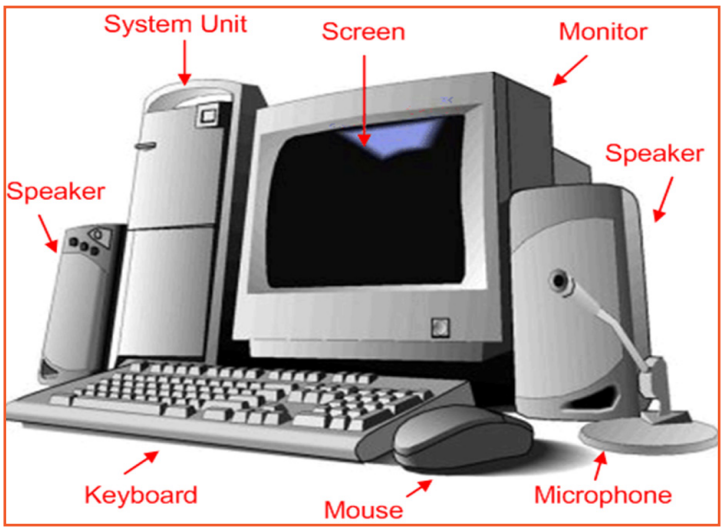
Macluumaad: Waa qaab xogeedka la farsameeyay, oo macno samaynaaya isla markaana ka caawinaya gaarista iyo fahamka ujeeddada.

Kombiyuutarrada waxaa aan u adeegsannaa dhamaan howl maalmeedkeenna.

Ujeedku waa in si habeysan loo isticmaalo qalabka kombiyuutarka si loo daboolo baahiyaha aadanahu ee aan dhammaadka lahayn isna badbadala.

t. Qeybaha kombiyuutarka

Kombiyuutar waxa uu ka kooban yahay qaybo elektaroonig la isu geeyay oo isugu jira kuwa asaasiga iyo kuwa kaabayaal ah. Qaybahiisa waxa ka mid ah qalabka farsamada (**Hardware**) oo ay ka mid yihiin aaladaha galinta **(input devices),** aaladda wax soo saarka **(output devices),** habka kombiyuutarka **(System unit)**, aaladaha keydinta **(Storage devices)**, iyo aaladaha isgaarsiinta **(communication devices).** Sawirka hoose fiiri waa qaar ka mid ah aaladaha kor lagu soo xusay iyo kuwa kale oo lala isticmaalo kombiyuutarka.



1. Aaladaha galinta (input devices)

Aaladaha galintu waa qayb ka mid ah qalabka kombiyuutarka (Hardware) waxa ay kuu ogolaaneyaan inaad xareyso ama aad u geliso xog iyo tilmaamaha (instructions) kale ee kombiyuutar. Shan aaladood oo si ballaadhan loo adeegsado oo ka mid ah aaladaha galinta waxa ay kala yihiin: furaha xarfaha (keyboard-ka), hagaha (Mouse), makarafoonka (Microphone), Iskaanar (Scanner), iyo Kaamerada (Webcam).

- Furaha xarfaha (Keyboard) waxa uu ka kooban yahay furayaal aad riixdo si aad xogta u geliso kombiyuutarka. Furaha xarfaha (keyboard) sida kuwa ay soo saarto shirkada IBM-ta waxa ay ka kooban yihiin furayaal tiradooda garayso 101 fure. Ujeedo amni darteed, furaha xarfaha (keyboard) qaarkood waxa ay leeyihiin faro akhriste (fingerprints), taas oo kuu ogolaaneysa inaad ku shaqeyso kombiyuutarka kaliya haddii la aqoonsado farahaaga.
- Hagaha (Mouse) waa aalad yar oo gacanta lagu qabto taas oo aad ku xakamayn kartid dhaqdhaqaaqa falaarta yar shaashadda kombiyuutarka ka muuqanaysa, oo la yiraahdo tilmaamaha (pointer) oo lagu dooran karo barjaamijyada ama faylasha dulsaaran shaashadda kombiyuurka.
- Makarafoonku waxa uu kuu oggolaanayaa inaad cod ku gudbiso kombuyuutarka.
- Iskaanar (Scanner), waa Sawir qaade u rogaya waxyaabaha daabacan (sida qoraalka iyo sawirada) qaab digital ah.
- Kaamerada (Webcam), waa kaamarad fiidiyow oo dijitaal ah oo kuu ogolaanaysa inaad abuurto filim ama sawirro lagu kaydin karo kombiyuutarka.

2. Aaladaha Soo Saarka (Output Devices)

Qalabka wax soo saarka ama bandhigista waa qayb ka mid ah qalabka (hardware) kombiyuutarka ee macluumaadka u gudbiya hal qof ama dad badan. Waxaa jirta saddex qalabka oo dibada xogta uga soo saaro kombiyuutarka waxa aana ka mid ah qalabka daabacaadda (printer), shaashada (monitor), iyo sameecado (spearkers).

- Daabacaada (printers) waxa ay soo saartaa qoraal qaab muuqaal ah ugu daabacan warqad iwm
- Shaashad (Monitor), kombiyuurtka waxa uu shaashadda ku soo bandhigayaa qoraal, muuqaallo, iyo fiidiyowyo.

- Sameecada (speakers) waxa ay kuu oggolaanayaan inaad maqasho miyuusik, cod, iyo maqal kale.

3. Habka Kombiyuutarka (System Unit)

Habka (system) waa sanduuq ay ku jiraan qeybaha elektarooniga ah ee kumbiyuutarka loo isticmaalo in lagu habeeyo xogta. Laba qaybood oo waaweyn oo ku yaal looxada hooyada (Motherboard-ka) ayaa kala ah: maskaxda (processor-ka) iyo xusuusta (memory). Processor-ka, waxaa kaloo loo yaqaanaa Central Processing Unit (CPU), waa qaybta elektiroonigga ah ee fasiraysa isla markaasna fulinaysa tilmaamaha aasaasiga ah uu ku shaqeeyo kombiyuutarka. Xusuusta (memory) waxa ay ka kooban tahay elektiroonig kaydiya tilmaamaha (instructions) ee kombiyuutarka. In kasta oo qaababka xusuusta qaarkood yihiin kuwa joogto ah, inta badan xusuusta waxa ay si kumeel gaar ah u keydisaa macluumaadka, oo macnaheedu yahay in la masaxi doono marka kumbuyuutarka la xidho ama la damiyo.

4. Aaladaha Kaydinta (Storage devices)

Qalabka Kaydinta (storage device) waxa ay hayaan xog joogta ah, tilmaamo, iyo macluumaadka si mustaqbalka loo adeegsado. Tusaale ahaan, Kombiyuutaradu waxa ay kaydin karaan malaayiin ama balaayiin magacyada macaamiisha iyo cinwaannooda. Kombiyuutarku waxa uu kuu kaydiyaa xogta, tilmaamaha, iyo macluumaadka khaaska ah. Tusaalooyinka aaladaha wax lagu kaydiyo waxaa ka mid ah: flaska (USB flash drives), hard disk drive, keydinta CD iyo DVD-ka iyo kaararka xusuusta.

Waxtarka iyo caqabadaha isticmaalka Kombiyuutarada: Waxtarka Kombiyuutka ee dhiirrigelinaaya isticmaalkiisa waxaa ka mid ah: **xawaaraha, isku halaynta, joogtaynta, kaydinta, iyo isgaarsiinta.**

- **Xawaare (Speed):** Marka xogta, tilmaamaha, iyo macluumaadka ku qulqulaya wareegyada elektarooniga ah kombiyuutarka dhexdiisa, waxa ay ku socdaalaan

si aan caadi aheyn oo dhakhso xawaare leh. Kombiyuutarro badan ayaa sameeya balaayiin ama tiriliyan hawlgallo hal ilbiriqsi gudahood. Hawlgalku waxa uu ku lug leeyahay xisaabinta (tusaale, ku darista, kala goynta), kala soocidda (tusaale ahaan, qaabka kal hormarsiin ah), soo bandhigida sawirrada, duubista codka, miyuusik garaacista, iyo muujinta filimada ama fiidiyoowyada.

- **Isku halaynta (Reliability):** Qalabka elektaroonigga ah ee ku jira kombiyuutarada casriga ah waa laysku halayn karaa iyo lagu kalsoonaan karaa maxaa yeelay marar dhif ah ayey jabaan ama shaqada joojiyaan.
- **Joogteynta (consistency):** Marka la galiyo hal natiijo kombiyuutaro kala duwan waxa ay soo saari doonaan natiijooyin iswaafaqsan oo isku mid ah.
- **Keydinta (Storage):** Kumbiyuutarka waxa uu si dhaqso leh uga wareejin karaa xogta ku jirta kaydinta isagoo gaynaya qaybta xusuusta, ka dibna habayn karaa (process) oo mar labaad kaydin karaa si loo isticmaalo mustaqbalka. Kumbiyuutarro badan ayaa keydin karo xog aad u tiro badan kana dhigi karo xogtaan mid diyaar u ah isticmaal waqti kasta oo loo baahdo.
- **Isgaarsiinta (Communication):** Kombiyuutarada badankood maanta wey awoodaan in ay la xiriiraan kombiyuutarrada kale, badanaa silig la'aan (wireless). Kombiyuutarradan awoodda leh ayaa la wadaagi kara wax kasta oo ka mid ah afarta wax-qabad ee kombiyuutarka sida – aqbalid soo galin, socodsiin amar ama waxqabad, soo saarid maxsuul, iyo kaydinta xog ama macluumaad ee kombiyuutar kale ama isticmaale.

5. Caqabadaha lagala kulmi karo isticmaalka kombiyuutarka

Caqabadaha qaarkood ee ka dhasha isticmaalka kombiyuutarku waxa ay la xiriiraan caafimaadka, ku xadgudubka arrimaha gaarka ah ee qofka (Privacy), badbaadada dadweynaha, saameynta ay ku yeelato xoogsatada, iyo saamaynta deegaanka.

- **Saamaynta Caafimaadka:** isticmaalka Kombiyuutarka ee muddo dheer ama u isticmaalka si aan haboonayn waxa uu horseedi karaa dhaawacyo ama cillado

gacmaha, curcurka (wrist), xusullada, indhaha, qoorta, iyo dhabarka.

- **Ku Xadgudubka arrimaha gaar ah ee qofka (privacy):** Ku dhowaad dhacdo kasta oo nolosha ah sida Diiwaanada goobaha caafimaadka, warbixinnada amaahda, diiwaannada canshuurta iwm waxaa lagu keydiyaa kombiyuutar. Marar badan, haddii qofku uusan u ilaashan xogtiisa sida ugu haboon waxa uu la kulmayaa ku xad gudub iyo in xogtiisa iyo aqoonsigiisa la xado.
- **Saameynta Xoogga Shaqaalaha**: In kasta oo kombiyuutarada ay sara u qaadeen ama ay hormariyeen wax soosaarka siyaabo badan, hadana malaayiin ayaa xirfadooda ku waayay shaqo isticmaalka kombiyuutarka oo buuxiyay kaalintooda darteed.
- **Saamaynta ay ku leedahay Deegaanka:** Nidaamyada wax soo saarka kombiyuutarka iyo qashinka kombiyuutarka ayaa ka qayb qaata xaalufinta kheyraadka dabiiciga ah waxa ayna wasaqeeyaan deegaanka. Marka kombiyuutarada lagu tuuro qashinka, waxa ay sii deyn karaan walxaha sunta ah iyo heerarka halista ah ee meerkurida iwm.

Waxqabadka 1aad:

Waxa aan koox-koox uga doodeynaa qeybaha uu ka kooban yahay kombiyuutarka

Waxqabadka 2aad:

Waxa aan ka dalbanaynaa macalinku in uu noo keeno kombiyuutar, si aan waxa ku jira guddaha habka kombiyuutarka (system unit) u furfurno una kala garanno dhammaan qaybahiisa

Waxqabadka 3aad:

Waxa aan koox-koox uga doodaynaa faa'idooyin kale ee kombiyuutarka uu leeyahay ee aan casharka lagu xusin

Waxqabadka 4aad:

Waxa aan koox-koox uga doodaynaa faa'iido darada kale ee kombiyuutarka uu leeyahay ee aan casharka lagu xusin

Gunaanad

Casharkan waxa aan ku soo barannay

1. Ereyga Kombiyuutar "Computer", waxa uu ka yimid erayga "compute" oo macnahiisu yahay xisaabinta.
2. Kombiyuutarka waxa uu ka kooban yahay afar qeybood oo muhiim ah sida: aaladaha galinta (input devices), Aaladaha wax soo saarka (output devices), habka kombiyuutarka (System unit), aaladaha keydinta (Storage devices), iyo aaladaha isgaarsiinta (communication devices).
3. Faa'iidooyinka loo adeegsado kombiyuutarradu waxaa ay kal yihiin: xawaaraha, isku halaynta, joogtaynta, kaydinta, iyo isgaarsiinta.
4. Faa'iido darrooyinka kombiyuutarku waxaa ka mid ah: khataraha caafimaadka, ku xadgudubka arrimaha gaarka ah ee qofka (Privacy), badbaadada dadweynaha, saameynta ay ku yeelato xoogsatada, iyo saameynta deegaanka.
5. Laba qaybood oo waaweyn oo ku yaal looxada hooyada (Motherboard-ka) ayaa kala ah maskaxda (processor-ka) iyo xusuusta (memory).

Layli

1. Sharax kooban ka qor macnaha ereyga kombiyuutarka.

2. Sheeg qeybaha uu ka kooban yahay kombiyuutarka

3. Sheeg afar ka mid ah faa'iidooyinka uu leeyahay kombiyuutarka?

4. Sheeg saddex faa'iido daro uu leeyahay kombiyuutarka?

5. Sharaxaad kooban ka bixi waxa ay tahay looxadda hooyada (Motherboardka) iyo inta ay ka kooban tahay.

Suaal: Kombiyuutarado sare ma u qaadaan howlaha xafiisyada, guryaha iyo goobaha waxbarashada

Ujeeddooyinka

Dhammaadka casharkan bare-ardaydu waxa ay awood u yeelanayaan in ay:

1. Sharrax guud ka bixiyaan noocyada kombiyuutarrada
2. Falanqayn karaan meelaha loo kala adeegsado kombiyuutarka
3. Sheegi karaan adeegsiga noocyada kala duwan ee kombiyuutarka
4. Xiriir ka dhexeysiin karaan sawirka kombiyuutarka iyo magaciisa.
5. Xiriir ka dhexeysiin karaan baaxadda kombiyuutarka iyo hawshiisa

Noocyada, Cabirad Kombiyuutarada

Haddii loo fiiriyo qaabka loo adeegsigo Kombiyuutarrada, waxaa kombiyuutarada loo qeybiyaa: Kombiyuutarada miiska, kuwa dhabta, kuwa calaacasha, serferiska (servers) iyo kuwa waaweyn oo kal ah: kuwa ay adeegsadan shirkadaha waaweyn oo loo yaqaano mainframe computers (Kombiyuutarada maynfaremka) iyo kuwo kale oo ay adeegsadaan dowladaha oo loo garan og yahay Super Computers (Kombiyuutarrada Super-ka ah).

1. **Kombiyuutarada miiska (desktop-ka)**

Waa Kombiyuutarrda ugu badan ee la adeegsado, waxaa lagu isticmaalaa xafiisyada, dukaamada, cisbitaalada, guryaha iwm**.** Kombiyuutarka miiska (desktop) waa kombiyuutar qaban kara dhammaan gelinta xog ama maclumaad (input), habaynta ama ka shaqeysiinta (process), soo saarida (output), iyo howlaha keydinta kaligiis. Kombiyuutarka shaqsiyeed waxa uu ka kooban yahay maskax (processor), memory (xasuus), hal ama in ka badan xaraynta xogta (input), soo saarida (output), iyo qalabka wax lagu keydiyo (storage). Kombiyuutarada shaqsiyadeed sidoo kale

badanaa waxaa ku jira a qalabka isgaarsiinta (communication device).

Laba qaab dhismeed ee caan ah ee kombiyuutar miiska ayaa jira kuwaas oo kal ah: kombiyuutarka shaqsiga Personal computer (PC) iyo kuwa ay soo saarto shirkada (Apple)

2. **Kombiyuutarka Dhabta (Laptop Computer)**

Waa kuwo loogu talagalay dadka aan shaqada ku qabanin meel joogta ah, oo gala safaro ha noqdeen kuwo dhaadheer ama kuwa magalado gudaheeda sidoo kale waxaa loo yaqaana Kombiyuutarka xusuustaqorka (Notebook computers). Kombiyuutarka dhabta waa kombiyuutar shakhsiyeed oo la qaadan karo fududna, badanaa loogu talagalay inuu ku habboonaado dhabtaada iwm.

3. **Kombiyuutarka Calaacasha (Palm/PDA, Tablet PC)**

Kombiyuutarkan waxaa loogu talagalay dadka aanan u baahnayn shaqo weyn ay ku qabtaan **Kombiyuutarka** laakiin u baahan in ay jadwalkooda shaqada iyo ballamadooda kala socdaan hadday u baahdaanna wax ka beddelaan iyo akhriska farimaha elektrooniga ah (e-mail).

Tablet PC waa nooc gaar ah oo xusuus qor ah, waa kombiyuutar kuu oggolaanaaya inaad wax ku qorto ama ku sawirto shaashaddiisa adoo adeegsanaaya qalin dijitaal ah (digital pen).

4. **Aalada Mobaylka**

Qalabka mobilada oo ah kuwa yar yar oo ku filan in lagu qaato jeebka, badanaa malaha qeebta cajalaha (disk device). Taas badalkeeda, qalabkani waxa ay keydiyaan barnaamijyo iyo xogo si joogto ah ayagoo ku keydinaayo xasuusta gudaha oo qeyb ka ah systemka mobaylka ama in lagu keydiyo kaarka xusuusta (memory card). Badanaa waxaad awoodaa in aad ku xirto aalada mobaylka kombiyuutarka miiska ama kan dhabta si aad isugu dhaafsato macluumaadka ka dhexeeya kombiyuutarka iyo qalabka mobaylka.

Telefoonada Casriga ah (Smart Phones) waa taleefan internetka ku shaqeeya oo badanaa waxa ay bixiyaan shaqooyinka maaraynta macluumaadka shaqsiyeed sida kalandarka, buugaagta ballanta, xisaabiye (Calculator), iyo xasuus qor.

5. **Qalabka ciyaarta (Game Console)**

Qalabka ciyaarta waa kombiyuutar xisaabeed loogu talagalay hal qof in uu ciyaaro (single-player) ama dhowr qof, waxa aana ku jira muuqaallo badan. Saddex nooc oo caan ah oo qalabka ciyaarta ah ayaa jirto kuwaas oo kal ah **Microsoft' Xbox 360, Nintendo's Wii iyo Sony's PlayStation 3**.

6. **Serfariska (Servers)**

Serfarku waa kombiyuutar ka awood sareeyaya kombiyuurrada miiska iyo kuwa dhabta, waxa uu xakameynayaa gelitaanka qalabka (hardware), barnaamijyada (software), iyo xog kale oo ay u baahan yihiin kombiyuutarada kale. Sarfarku waxa uu bixiyaa keydin dhexe (central storage) oo lagu keydiyo barnaamijyada, xogta, iyo macluumaadka. Serfarisku waxa ay awoodaan taageerida laba ilaa dhowr kun oo kombiyuutaro in ay siiyaan adeegyada ay u baahan yihiin. Inta badan kombiyuutaradaan waxaa adeegsada bangiyada iyo shirkadaha waa weyn.

7. **Kombiyuutarda maynfaraymka (Mainframe computers)**

Kombiyuutarada waa weyn (Mainframe computers): waa kombiyuutarro waa weyn, qaali ah, awood badan kaas oo siin Kara shaqada ay u baahan yihiin boqollaal ama kumannaan isticmaaleyaal kombiyuutar isku xiran. Kombiyuutarrada waa weyn (Mainframe computers) waxa ay kaydiyaan xaddiga xogta, tilmaamaha,

iyo macluumaad aad u badan. Inta badan shirkadaha waawayn waxa ay u adeegsadaan howlaha ganacsigooda. Shirkadaha waaweyn waxa ay awoodaan siinta biilasha malaayiin macaamiil ah, u diyaarinta mushaharka kumannaan shaqaale ah, iyo maaraynta kumannaan badeeco. Kombiyuurada waaweyn waxaa ku xiran kombiyuutaro aad u yar yar kuwaas oo loo yaqaano (Terminals).

8. **Kombiyuutarada waaweyn (Supercomputers)**

Kombiyuutarada aadka u waa weyn (Supercomputer-ka) waa kombiyuutaro aad u waawayn oo dhaqso badan, uguna awoodda badan, waxa ayna qabtaan hawlo aad u culus. Waa Kombiyuutarrada ugu qaalisan ee dunida yaala. Kombiyuutarradaan waxa ay awoodaan ka shaqeynta wax ka badan hal quadrillion amar ah hal ilbiriqsi gudahiis. Miisaankiisa waxa uu ka badan yahay 100 tan, kombiyuutarradaan ayaa kaydin kara wax ka badan 20,000 jeer xogta iyo macluumaadka uu keydin karaan kombiyuutarada miiska celcelis ahaan

Kombiyuutarada waa weyn (Supercomputers) waxaa loo adeegsadaa:

- Sayniska iyo cilmi baarista tamarta nukliyeerka
- Milateriga iyo hubka khatarta ah
- Barnaamijyada madadaalada sida cayaaraha internet-ka dhexdiisa.

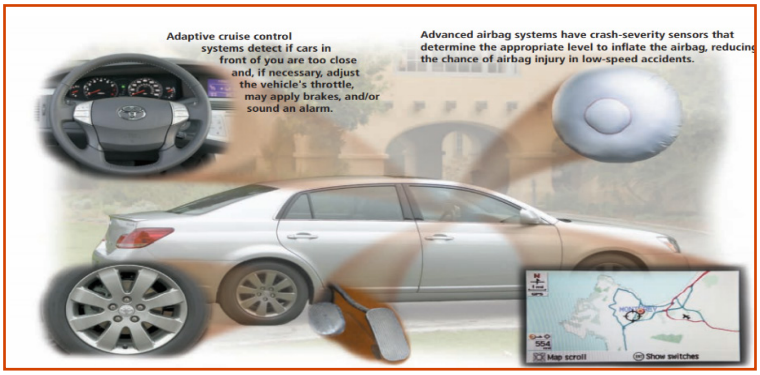
- Saadaasha hawada iyo dayax-gacmeedyada
- Baarista batroolka Iwm.

9) **Kombiyuurada gundhiga ah (Embedded computers)**

Kombiyuurada gundhiga (Embedded computers) waa kombiyuutaro ujeeddo gaar ah laga leeyahay kuwaas oo ku shaqeeya qalabka ay isticmaalaan dadka sida: Mobaylka, dijital telefonka, dijital telefeshinka. Waxaa ka mid ah:

- Qalabka iswada (automatic) ee guryaha (heerkul-beegyada, ilaalinta amniga iyo qalabka nalalka).
- Baabuurta (bareegyada, xakamaynta mashiinka baaburta)
- Qalabka Kombuyuutarka, Mashiinnada Xafiiska, looxa furaha (keyboard), daabacayaasha (printers), fakisyada (fax), iyo mashiinada nuqulaynta (copy machines).

Sidoo kale waxa ay ku dhex jiraan qalabka waa weyn, sida diyaaradaha, maraakiibta, doomaha waa weyn iyo baabuurta.



Waxqabadka 1aad:

Waxa aan isbarbardhigayaa noocyada kombiyuutarrada aniga oo ka fiirinaya:

- Xagga dhakhso badanida.
- Xagga baaxadda ama waynida
- Xagga qaadashada.

Waxqabadka 2aad:

Cilmi Baaris: Waxa aan soo qorayaa Kombiyuutarka Calaacasha meelaha loo isticmaalo

Waxqabadka 3aad:

Waxa aan la waadagayaa saaxiibkey hawlaha uu qabto kombiyuutarka aadka u weyn (Super Computer).

Waxqabadka 4aad:

Wax aan qorayaa faa'iidada uu kombiyuutarku aniga ii leeyahay gaar ahoon xagga waxbarashada

Waxqabadka 5aad:

Cilmi Baaris: Waxa aan baarayaa dhibaatooyinka iyo faaiidooyinka ay leeyihiin cayaaraha (Games) kombiyuutarka.

Waxqabadka 6aad:

Midkee baa caan ah labada qaabdhismeed ee kombuyuurada miiska (desktop) ee kala ah PC iyo Apple

Gunaanad

Casharkan waxa aan ku soo barannay

1. Noocyada iyo cabirada kombiyuutarka waxa ay u kala qeybsamaan

b. kombiyuutarrada miiska (desktop-ka)

t. kombiyuutarada gacanta(mobile computers)

j. Aaladaha gacanta(mobile devices)

x. Qalabka ciyaarta (game consoles)

k. Kombiyuutarka serverka (Servers)

d. kumbiyuutarrada waaweyn ee shirkadaha (Mainframe computers)

r. kumbiyuutarrada waaweyn ee dowladaha (Supercomputers)

s. Kombiyuutarrada gundhigga ah (Embedded computers).

Layli

1. Sharaxaad kooban ka bixi waxa uu yahay looxada hooyada (Motherboardka) iyo qeybaha ay ka kooban tahay.
2. Sheeg noocyada kombiyuutarrada
3. Imisa qeybood ayuu u qaybsanaa kombiyuutarka miiska

Casharka 3aad Qeybaha Software-ka iyo ku kordhinta (ku shubashada) barnaamijyada ee kombiyuutarka

Su'aal: fikrad sidee ah ayaad ka haysataa Software?

Ujeeddooyinka casharka:

Dhammaadka casharkan bare-ardaydu waxa ay awood u yeelanayaan in ay:

1. Sharxi karaan waa maxay barnaamij kombiyuutar.
2. Kala garan karaan noocyada ay u qaybsamaan barnaamjiyada kombiyuutarka.
3. Sharxi karaan Barnaamijyada Adeegga (Application software)
4. Sharxi karaan Barnaamijyada nidaamka (system software)
5. Is bar bar dhigi karaan barnaamijyada nidaamka iyo kuwa adeegga
6. Garan karaan qaabka loogu kordhiyo (shubo) kombiyuutarka barnaamij

Barnaamijyada (Software) waa xirmo amaro iyo tilmaamo ah oo u qeexa kombiyuutarka qaabka uu u habayn lahaa xogta. Barnaamijyada waxa loo qeybiyaa laba nooc oo muhim ah:

1. Barnaamijyada **Nidaamka** (**system software**) oo ah barnaamijyo ka shaqeysiiya kombiyuutarka iyo qalabkiisa ama taageera barnaamijyada adeegga. Qeybta la'aanteed kombiyuutarku waxa uu noqonayaa aalad aan waxba tarayn oo meel iska taal. Waxa uuna u qeybasamaa laba qeybood oo kal ah:
   - Nidaamka hawlgalka(operating system) iyo
   - Barnaajimka waxtarka (utility programs).

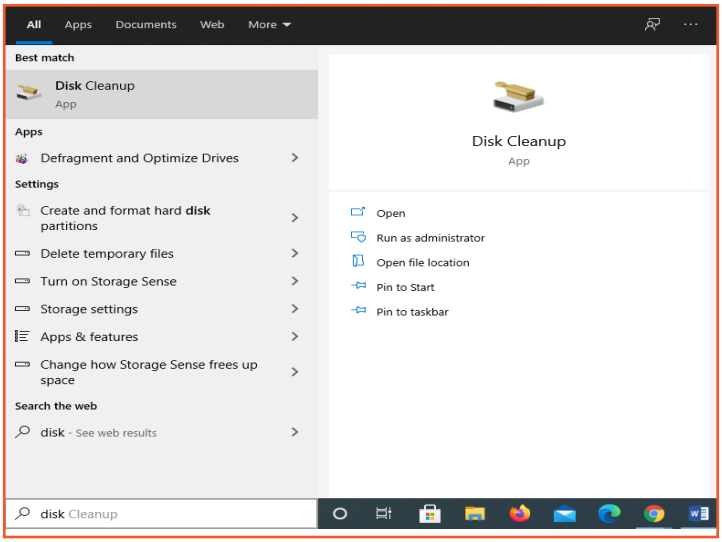
- **Nidaamka Hawlgalka (Operating system)** Nidaamka hawlgalku waa qaybo barnaamijyo ah oo isku xidha dhammaan qalabka (hardware) kombiyuutarka. Waxa ay siiyaan adeegsadayaasha inay ku wada xiriiraan kombiyuutarka. Qaar badan oo ka mid ah kombiyuutarada maanta waxa ay isticmaalaan Windows-ka Microsoft, ee nooca ugu dambeeyay ama Mac OS ee kombiyuutarrada

Apple-ka. Markii adeegsaduhu uu bilaabo kombiyuurka, nidaamka howlgalku (operating system) waxaa lagu soo diyaarinayaa maskaxda kombiyuutarka kaasoo laga soo guuriyo qaybta kaydinta kombiyuutarka (hard disk drive).

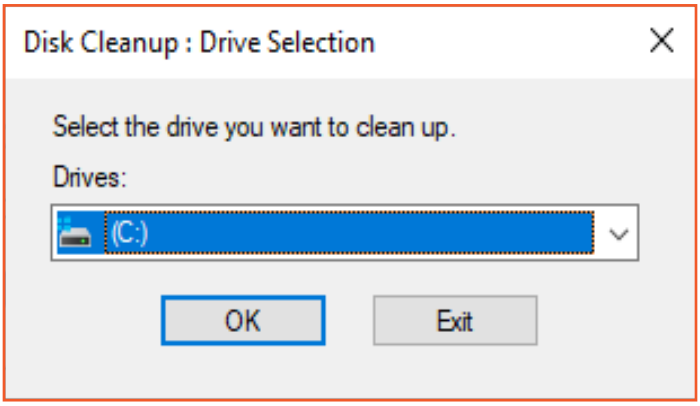
- **Barnaamijka adeegsiga (Utility programs)** waxa uu u oggolaanayaa isticmaalaha si uu u qabto hawlaha dayactir ah badanaa oo la xiriira maareynta kombiyuutarka, qalabkiisa, ama barnaamijyada. Tusaale ahaan, waxaad isticmaali kartaa barnaamijka waxtarka **(Utility programs)** si loogu wareejiyo sawirada dhijitaalka ah. Barnaamijyadan waxaa ka mid ah dhowr barnaamij oo loogu talagalay maaraynta cajalada kombiyuurtarka (disk device), daabacaada (print), iyo kuwa kale. Sawirka hoose waxaa ka muuqda qaabka adeegsadaha u maareyn karo ama sare ugu qaadi karo waxtarka kombiyuutarkiisa sida in la sameeyo hagaajinta cajaladda (disk clean) iwm.

Si aad u samayso hagaajinta cajaladda samee talaabooyinka soo socda:

1. **Ku qor qeybta raadin ereyga "disk clean"**
2. **Guji astaanta "disk cleanup"**



3. Dooro qeybta aad doonayso in lagu sameeyno (disk clean)



4. Guji ok

2. **Barnaamijka Adeegga (Application software):** waa barnaamijyada qabta shaqooyin uu si toos ah u xiisaynaayo adeegsadaha sida barnaamijka mareegta (web browers), kaas oo u oggolaanaaya isticmaalayaasha leh xiriir internet in ay helaan ama booqdaan bogagga internetka. Barnaamijyada Adeegga waxaa ka mid ah:

- Ms Word oo qoraallada loo adeegsado.
- MS Excel oo xisaabaadka loo isticmaalo.
- MS Paint oo sawirrda loo adeegsada.
- MS PowerPoint oo casharka lagu soo bandhigo
- Iyo kuwa kale oo badan.

Waxqabadka 1aad:

Waxa aan koox-koox uga doodeynaa oo soo bandhigeynaa faraqa u dhexeeya Barnaamijyada Nidaamka iyo kuwa Adeegga.

Waxqabadka 2aad:

Cilmi baaris: Waxaa qorayaa laba ka mid barnaamijyada nidaamka oo aan casharka lagu sheegin.

Waxqabadka 3aad:

Cilmi baaris: Waxaa qorayaa laba kamid barnaamijyada adeegga oo aan casharka lagu sheegin.

Qaabka Kombiyuutarka loogu kordhiyo (shubo) barnaamij

Marka aad ka soo iibsato barnaamijka (software) meelaha lagu iibiyo inta badan waxa uu ku jiraa cajalad CD /DVD (CD – drive and DVD) ama waxa uu ku jiri karaa cajaladda flash-ka (USB flash – disk) ama waxaa lagala soo degi karaa internetka.

Ku kordhinta (Installing): ayaa ah habka uu barnaamijku kula shaqeeyo kombiyuutarka, daabacaha, iyo wixii kale oo qalabka (hardware) ah.

Waxqabadka 4aad:

Waxa aan macalinka ka dalbanaynaa in uu na tuso sida kombiyuutarka loogu shubo barnaamij loogana soo dagsado internetka.

Waxqabadka 5aad:

Waxa aan macalinka ka dalbanaynaa in uu na tuso sida kombiyuutarka looga tiro barnaamij ku jira kombiyuutarka

Waxqabadka 6aad:

Waxa aan koox – koox isku dayaynaa in aan ku shubno kombiyuutarka barnaamji, sida mid ka mid ah kuwa loo isticmaalo mareegta (web browers)

Gunaanad

Casharkan waxa aan ku soo barannay

1. waa maxay barnaamij kombiyuutar
2. Qaybinta noocyada barnaamijyada(software-ka)
3. Meelaha loo adeegsado kombiyuutarka
4. Barnaamijyada Adeegga (Application software)
5. Waxa uu yahay kordhin (ku shubid) barnaamij

Layli

1. waa maxay barnaamij kombiyuutar
2. Qoraal kooban ka qor noocyada barnaamijyada(software-ka)
3. Waa maxay barnaamij ku kordhin kombiyuutar?
4. Waxaad ku kordhisaa kombiyuutarka barjaamidka MS – Word

Casharka 4aad Adeegsiga Kombiyuurtarka

Su'aal: Ma jiraan meelo aad is leedahay adeegsiga Kombiyuutarka aad baa loogu baahan yahay? Qor meelahaas adoo u kala hor marinaayaa sidaa ay ugu kala baahi badan yihiin

Ujeeddooyinka:

Dhammaadka casharka Bare-ardaydu waxa ay awood u yeelanayaan in ay:

1. Sharaxaad ka bixin karaan sida Kombiyuutarka loogu adeegsado Hawlo maalmeedka.
2. Kala saari karaan adeegsiyada kala duwan ee kombiyuutarka
3. Falanqayn karaan sida adeegsiga kumbuyuuterku ay u fududeyso Howlaha kala duwan.
4. Gartaan sida ay bulshada ugu adeegsato kombiyuutarrada howlaha Waxbarashada, Maaliyadda, Adeegyada Dowladda, Daryeelka caafimaadka, Daabacaadda, Safarrada, Cilmi Baarista, Saadaasha Cimilada iyo Warshadaha

Adeegsiga Kombiyuurtarka

Kombiyuutarka waxaa loo adeegsadaa hawlo kala duwan oo la xiriira nolol maalmeedka. Waxaa ka mid ah waxyaalaha loo adeegsado.

Dadku si toos ah ayey ula falgalaan Kombiyuutarrada gudaha dhinacyada: Waxbarashada, Maaliyadda, Dowladda, Goobaha caafimaadka, Sayniska, Daabacaadda, Safarada iyo wax soo saarka.

Waxbarashada

Tacliintu waa habka lagu kasbado aqoonta, qaabkii hore waxa ay ahayd in dadka ay wax ka bartaan waalidiinta, macalimiinta iyo noocyo badan oo ka mid ah waxyaabaha daabacan sida buugaagta. Maanta, barayaashu waxa ay adeegsadan kombiyuutarro si ay ugu sahlanaato waxbaridda.

Iskuullada qaarkood waxa ay u baahan yihiin ardayda inay haystaan kombiyuutar ama mobilada gacanta si ay u helan internetka iskuulka oo ah silig la'aan (wireless). Si waxbarashada kor loogu qaado ayadoo la adeegsanaayo kombiyuurada, ganacsato badan ayaa iibiya barnaamijyo (softwares) qiimo dhimis ballaaran leh oo ardayda loogu tala galay.

Tusaale ahaan, ardaydu waxa ay ku qaadan karaan casharka mareegta internetka (wabsaydka). Fasallada qaarkood waxaa casharka lagu bixiyaa laba qaabood oo laysku daray (blend learning) mid toos ah iyo fogaan arag ah. In ka badan Boqolkiiba 70 kulliyadaha ayaa maaddooyinka ku bixiya qaabka fogaan barashada (distance learning).

Maaliyadda

Dad badan iyo shirkado ayaa adeegsada kombiyuutarrada si ay uga caawiyaan maamulidda dhaqaalahooda. Qaarkood waxa ay isticmaalaan barnaamijyada loogu talagalay arimaha dhaqaalaha, kuwa isku dheelitirka ah, bixinta biilasha, la socodka dakhliga shaqsiyadeed iyo kharashaadka, maareynta maalgashiga iyo qiimeynta qorshooyinka maaliyadeed. Tusaale ahaan Bangiga internetka (online banking), adeegsayaasho waxa ay helayaan xisaabaadka koontada, bixinta biilasha, iyo nuqul si online ah ayagoo aan tagin xarunta Bangiga.

Dowladda

Dawladdu waxa ay bulshada siisaa jihayn iyada oo samaysa oo maamusha siyaasado. Sido kale waxa ay muwaadiniinta siisaa macluumaad casri ah (update data), inta badan xafiisyada dowladda ayaa leh bogag internet ama mareeg ah waxaa kalo adeegsado booliska. Bogaggaas waxa ay shacabka kula wadaagaan macluumaad ay u baahan yihiin.

Daryeelka caafimaadka

Ku dhowaad goob kasta oo daryeel caafimaad ah maanta waxaa la isticmaalaa kombiyuutar. Waxyaabaha loo isticmaalo kombiyuutarada dhanka goobaha caafimaadka waxaa ka mid ah:

- Isbitaalada iyo dhakhaatiirtu waxa ay adeegsadaan kombiyuutarrada iyo mobaylada qalabka si loo ilaaliyo loona helo diiwaanka bukaanka.
- Kombiyuutarradu waxa lagula socdaa calaamadaha muhiimka ah (vital signs) ee bukaannada jiifa qolalka cisbitaallada.
- Cisbitaallada qaar Robotyo ayaa daawada u geeya xarumaha kalkaalisooyinka ee ku yaal isbitaalada.
- Kombiyuutarrada iyo aaladaha kombiyuutarka ayaa caawiya dhakhaatiirta, kalkaaliyayaasha caafimaadka, iyo shaybaarrada caafimaadka.
- Dhakhaatiirtu waxa ay u adeegsadaan shabakadda (internetka) iyo barnaamijyada caafimaadka inay wadaagaan baaritaanka iyo xaladaha bukaanka.

Daabacaadda

Daabacaaddu waa habka dadka lagula wadaago macluumaad ayagoo qoraal, maqal, muuqaal iwm. Macluumaadkaas waxaa lagu gidbin karaa buugaag, joornaallo, wargeysyo, muusig, filim, iyo video. Barnaamijyo (Software) gaar ah oo waxaa jira caawiya naqshadeeyayaasha garaafka bogagga, sawir gacmeedka, iyo sawirro; farshaxan-yahannada iyo kobcinta heesaha; filim sameeyayaasha iyo tafatirka filimka; iyo saxafiyiinta iyo wax ka beddelka fiidiyoowga

Safar (Travel)

Haddii aad ku safrayso gaari ama diyaarad, hadafkaagu waa inaad si nabad ah ku timaado goobta aad u socotay. Teknoolajiyadu waxa ay kaa caawini kartaa ogaanshaha xilliyada safarka dhaqaaqayo ama tagayo goobti aad ku socotay, qiimayaasha tigidhada, kuraasta bannaan iwm, waxaadna qabsan kartaa boos adiga oo gurigaaga ama goobtaada shaqada jooga.

Warshadaha (Manafacturing)

Kombiyuutaraa waxaa kaloo loo adeegsadaa wax soo saarka warshadada. Waxa ay si degdeg ah ku qabtaan howlaha soo noqnoqda, waxa loo adeegsadaa qabasha howlaha culus ama khatarta badan.

Cilmi Baarista (Research)

Kombiyuutarrada waxaa si wayn loogu adeegsadaa cilmi baarista sayniska waana aalad muhiim u ah howlahaas dunida maanta. Kombiyuutarradu aad ayey faa'iido u leeyihiin oo muhiim u yihiin marka xog baaxad leh oo la soo uruuriyay la rabo in cilmi baaris lagu sameeyo. Waxa ay leeyihiin cajalado kaydin kara xaddi wayn oo ah xogta la uruuriyay. Ka dibna waxa ay muddo aad u kooban ka soo dhiridhirin karaan xogtaas macluumaad wax badan ku kordhinaaya gaarista ujeeddooyinkii laga lahaa cilmi baarista.

Saadaasha Cimilada (Weather forcasting)

Waayaha aadanahu soo maray, waxaa jiray farsamooyin iyo tijaabooyin ay samaynayeen khubarada saadaasha hawada si ay u saadaaliyaan cimilada iyo waxa laga filan karo. Horumar la taaban karo oo dhanka tiknoolajiyadda ah awgeed, waxaa hadda suurtagal ah in la sii odoroso cimilada maalmaha iyo xitaa bilo ka hor inta aysan dhicin. Arrimahaas run ahaantii suurtagal ma ahayn ka hor bartamihii qarnigii 20-aad. Isticmaalka kombiyuutarka shaqooyin kala duwan oo iskaabaya qabanaaya ayaa soo shaac baxay sannadihii 1960-meeyadii, maadaama dayax-gacmeedyadii ugu horreeyay ee cimilada la bilaabay. Noocyada kala duwan ee kombiyuutarka ee loo adeegsado saadaasha ayaa inta badan ku xiran nooca cimilada iyo xaaladaha cimilada. Waxa ay ka warbixiyaan roobka, xawaaraha dabaylaha, heerkulka degaannada iwm.

Waxqabadka 1aad:

Waxa aan koox-koox isku weydinaynaa wax yaahaba kale ee waxbarashada la xariira ee kombiyuutarka loo adeegsado.

Waxqabadka 2aad:

Cilmi baaris: Waxa aan koox-koox isku weydinaynaa sida kombiyuutarka u saaciddo howlaha warshadaha

Gunaanad

Casharkan waxa aan ku soo barannay

1. Sida Kombiyuutarka loogu adeegsado Hawlo maalmeedka.
2. Sida adeegsiga kumbuyuuterku ay u fududeyso Howlaha kala duwan.
3. Sida ay bulshada ugu adeegsato kombiyuutarrada howlaha Waxbarashada, Maaliyadda, Adeegyada Dowladda, Daryeelka caafimaadka, Daabacaadda, Safarrada, Cilmi barista, Saadaasha Cimilada iyo Warshadaha

Layli

1. Qoraal kooban ka samee sida Kombiyuutarka loogu adeegsado Hawlo maalmeedka.
2. Kala saar adeegsiyada kala duwan ee kombiyuutarka
3. Ka faallo sida adeegsiga kumbuyuuterku ay u fududeyo howlaha kala duwan.
4. Qoraal kooban ka samee sida bulshada ugu adeegsato kombiyuutarrada howlaha Waxbarashada, Maaliyadda, Adeegyada Dowladda, Daryeelka caafimaadka, Daabacaadda, Safarrada, iyo Warshadaha

Qiimaynta Cutubka

Ka Jawaab su'aalahaan:

1. Faallo kooban ka qor ahmiyadda kombiyuutarka u leeyahay nolosha aadanaha
2. Tiri oo sharrax afarta hawlgal ee aasaasiga ah ee kombiyuutarka: soo galinta (input), Habaynta (Process), wax soo saarka (output), iyo kaydinta (Storage).
3. Sharaxaad kooban ka bixi waxa ay tahay looxadda hooyada (Motherboardka) iyo labadeeda qaybood ee waawayn
4. Ka faallo noocyada kombiyuutarka
5. Sharraxaad ka bixi sida ay u wada shaqeeyaan qeybaha muuqda iyo barnaamijyada ay ku shaqeeyaan kombiyuutarrada
6. Waa maxay xiriirka ka dhaxeeya tayada shaqo ee kombiyuutarka iyo qaab-dhismeedkiisa
7. Sheeg hawlaha ay qabtaan ama loo adeegsado kombiyuutarrada waaweyn.
8. Sharrax Barnaamijyada nidaamka (system software)
9. Sharrax Barnaamijyada Adeegga (Application software)

Cutubka 3aad: Xog iyo Macluumaad

Hordhac

Bani'aadamku waxa uu bilowgii hore tirinta u adeegsaday farahiisa. Waxa uu ku tirsan jiray tobonkiisa farood. Haddii ay tiradu ka badato toban, waxaa la tirin jiray qof kale, sidaa ayaa lagu wadi jiray ilaa tiradu dhamaato. Habka tirinta aadanaha waxa lagu saleeyaa nidaam ku dhisan toban toban (sal-10).

Kombiyuutarku waxa uu isticmaala hab kale oo uu ku soo bandhigo, ku shaandheeyo, kuna keydiyo xogta oo loo yaqaanno sal-2. Kombiyuutarradu waxa ay xogta u bedelaan macluumaad.

Cutabkan waxa aynu ku baran doonaa Kala saaridda xogta iyo macluumaadka, Qaabkee ayuu u diyaariyaa xogta kombiyuutarka, Habka Sal-10 iyo Habka Sal-2, Bit iyo Byte, Xisaab beddelka u dhexeeya lambarrada salkooda yahay 10 iyo kuwa salkoodo yahay 2, Sharrax Aalaadda kaydinta, Sharax noocyada kala duwan ee kaydinta xasuusta flash, Cajalaha adag (solid state drive), kaararka xusuusta (memory card), USB flash drives. Diskiga adag (hard disk drive) ee dibadda (external); Ku keydinta xogta internetka (Cloud storage) iyo bad qabka iyo ilaalinta xogta.

Ujeeddooyinka Cutubka

Dhammaadka cutubkan bare-ardaydu waxa ay awood u yeelanayaan in ay :

1. Kala saari karaan habka tirinta sal toban iyo sal labo
2. Isbarbar dhigi karaan Bit iyo Byte.
3. isku beddeli karaan nambarrada salkoodu yahay 10 iyo kuwa salkoodu yahay 2
4. Sharxi karaan xusuusta gudaha iyo noocyadooda.
5. Sharaxi karaan xusuusta dibadda iyo noocyadooda.

6. Qori karaan halbeegyada xusuus-hayayaasha kombiyuutarka.
7. Kala saari karaan noocyada xusuus-haya kombiyuutarka.
8. Garan karaan noocyada kala duwan ee kaydinta xusuusta flash: Cajaladaha adag (solid state drive), kaararka xusuusta (memory card), USB flash drives. Diskiga adag (hard disk drive) ee gudaha iyo midka banaanka (external) laga saari karo.
9. Fahmaan ujeeddada iyo isticmaalka aaladaha keydinta ee kaydka Daruuraha (Cloud storage)
10. Ogaadaan khatarada ku wajahan xogaha iyo macluumaadka
11. Gartaan jiritaanka Fayrasyada iyo lid-Fayrasyo
12. Sharax kooban ka bixi sida haboon ee loo ilaaliyo xogta iyo macluumaadka

Tusmada Cutubka

Cutubkaan waxaanuu ka kooban yahay casharada soo socda:

Casharka 1aad: Bandhigidda Xogta

Casharka 2aad: Kaydinta Xogta iyo Macluumaadka

Casharka 3aad: Bad-qabka iyo llaalinta Xogta

Habka Waxbaridda

1. **Dood ku saabsan noocyada farqiga u dhexeeya xog iyo macluumaad**
   Ardayda waxaa la gelinayaa dood furan oo lagu kala saarayo xog (data) iyo macluumaad (information), iyadoo la tilmaamayo tusaalooyin nolosha dhabta ah ah.

2. **Koox-koox iskula weydiiya uguna dooda mawduuca**
   Ardayda waxaa loo qeybinayaa koox-koox si ay uga doodaan tusaalooyin kala duwan oo lagu kala garan karo xog iyo macluumaad, taas oo kor u qaadaysa is-dhexgalka iyo wada-shaqeynta.

3. **Ka shaqeynta tusaalooyin ku saabsan sida leysku beddelo Bit (bit) iyo Byte (baayt)**
   Ardaydu waxay si toos ah ugu shaqeynayaan tusaalooyin xisaabeed oo la xiriira badalidda bit-ka iyo byte-ka si ay u fahmaan cabbirka xogta.

4. **Akhrinta buugaag dheeraad ah ee la xiriira mowduuca**
   Waxaa la siinayaa ardayda fursad ay ku akhriyaan qoraallo dheeraad ah ama buugaag sharxaya xogta, macluumaadka, iyo unugyada cabbirka xogta.

5. **Su'aalo iyo Jawaabo**
   Waxaa la bixinayaa waqti su'aalo iyo jawaabo ah si loo xaqiijiyo in ardaydu fahmeen farqiga iyo isticmaalka xogta iyo macluumaadka.

6. **Tusin (Practical)**
   Waxaa lagu sameeyaa tusin ama hawlgal ficil ah oo ardaydu ku daawan-ayaan ama ku fulinayaan badalidda xogta (bit to byte) ama tusaalooyin la taaban karo oo muujinaya xog iyo macluumaad.

7. **Muuqaalo**
   Waxaa la daawanayaa muuqaallo waxbarasho oo si muuqaal ah u sharxaya fikradaha xogta, macluumaadka, bit iyo byte, si loo fududeeyo fahamka ardayda.

Ujeeddooyinka

Dhammaadka casharkaan bare-ardaydu waxa uu awood u yeelanayaan in ay:

1. Kala garaan karaan waxa ay kala yihiin xogta iyo macluumaadka
2. Xogaha ku diyaariyaan kombiyuutarka
3. Kala saari karaan habka tirinta sal toban iyo sal labo
4. Sharaxi karaan nidaamka binary-ga
5. Isbarbar dhigi karaan Bit iyo Byte
6. isku beddeli karaan nambarrada salkoodu yahay 10 iyo kuwa salkoodu yahay2

B. Waa maxay xog? Waa maxay Macluumaad?

Xogtu waa aruurinta waxyaabo aan la soo saarin (unprocessed), oo ka koobnaan kara qoraal (text), Nambarro, sawirro, maqal (audio), iyo muqaal (video).

Xogtu waa magaca loo bixiyo xaqiiqooyinka aasaasiga ah sida magacyo, Calaamado iyo tirooyin iwm. Waxa aan tusaale u soo qaadan karnaa xogta sida miisaanka shay ama qof, qiimaha, kharashyada, tirooyinka alaabada la iibiyey, magacyada shaqaalaha, Magaca ardayga, magaca iyo numberrada maaddooyinka uu qaato iwm.

Macluumaadku waa xog loo beddelay qaab waxtar leh ama la fahmi karo. Macluumaadka waxaa lagu helaa iyadoo la isku keenayo walxaha xogta si qaabaysan oo macno leh. Tusaale ahaan, buundooyinka ay heleen ardayda, magacyadooda, Aqoonsi Numberradooda ayaa ah xog, halka Bajeelaha arday la isugu keenayo xogtaas uu gudbinaayo macluumaad la xiriira gudbidda/dhicista, celceliska guud ee arday iwm. Hawlo badan oo maalinle ah ayaa loo isticmaalaa ama ku tiirsan macluumaadka kombiyuutarka. Sida kaaga muuqanaysa sawirkan hoose.

XOGTA		
2	Kilo Sokor	SSH 18,000
1	Kilo Bur	SSH 14,500
2	Kilo Gallay shiidan	SSH 10,000
1	Litir Salid	SSH 12,500
Lacagta uu bixiyay US$4=SSH 100,000		

Howsha Kombiyuutarka
7. Isu gayn qiimaha shay walba sida: Sokor- 2X18,000=SSH 36,000
8. Habaynta Xogta
9. Soo saarista dhammaan kharashka laga rabo
10. U baddalista lacagti US$ ee uu bixiyay SSH oo ay ku qiimaysan tahay badeecada
11. Kala jarista lacagta uu bixiyay iyo inta laga rabo sida 100,000 – 83,000 = 17,000

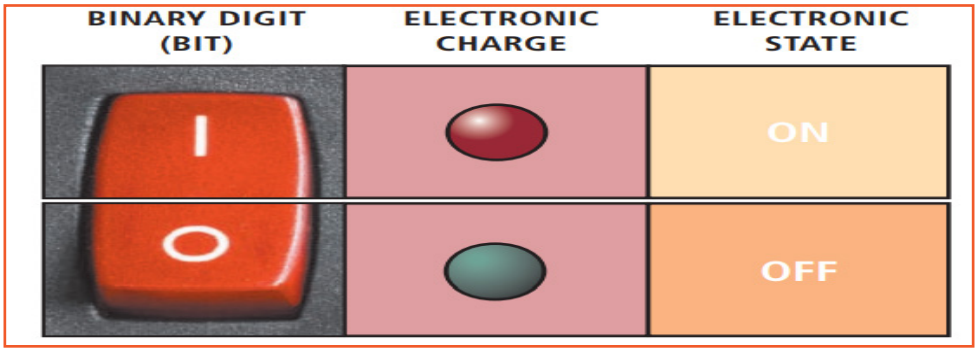
MACLUUMAAD *Dukaanka Barees Bakaaro* *Km – 5, tel: 0915000000 16/05/2021 Receipt #: 00636*		
Cadad	Badeecada	Wadarta Qiimaha badeeco kasta
2	Kilo Sokor	SSH 36,000
1	Kilo Bur	SSH 14,500
2	Kilo Gallay shiidan	SSH 20,000
1	Litir Salid	SSH 12,500
Wadarta Lacagta Laga Rabo SSH 83,000/= Lacagta uu bixiyay US$4=SSH 100,000/= Lacagta u soo haraysa = SSH 17,000/= Mahadsanid Macaamiilkeenna Khaaliga ah		

Tusaale sare oo la xiriira ganacsiga aan fiirinno: sheyga la dalbaday, qiimaha sheyga, tirada la dalbaday, iyo tirada loo helay dhammaantood waxa ay metelaan xogta. Kombuyuutarku waxa uu farsameeyaa xogta si uu u soo saaro risiidhka lacagta (macluumaadka) ama warqadda qaan sheegadka.

T. Habka Sal-10 iyo Habka Sal-2

Si loo fahmo sida kumbiyuutarku u habeeyo xogta, waa inaad ogaataa sida kombiyuutarku u diyaariyo xogta. Dadku waxa ay ku wada xiriiraan hadal ka kooban weedho.

Hadalka aadanaha waa **analog** maxaa yeelay waxa ay isticmaalaan hirar isdaba jooga. Kombiyuutarada waxa ay farriimaha ku gudbiyaan ama xogta ku kaydiyaan qaab dijitaal (digital) ah. Waxa ay aqoonsan yihiin oo keliya laba xaaladood oo kala duwan: shidan (On) iyo dansan (Off). Nambarrada 0 iyo 1, ayaa si fudud u matala labadan xaladood. Nambarka 0 waxa uu matalayaa xaalad elektaroonik ah oo maqnaasho Nambar 1 ayaa matalaya xaalad elektaroonigga ee joogitaanka ah.



Markay dadku wax tiriyaan, waxa ay isticmaalaan lambarrada ku jira nidaamka jajab tobanlaha (decimal system) (0 ilaa 9). Kombiyuutarka, marka la barbardhigo waxa uu adeegsadaa nidaam laba-geesood ah (binary system) maxaa yeelay waxa uu aqoonsan yahay oo keliya laba xaalad. Nidaamka binary-ga waa nidaam lambar oo leh laba lambar oo keliya, 0 iyo 1, oo loo yaqaan 'bit'.

Nolol maalmeedka sida ganacsiga, cabbiraadda dhererka, cufka, mugga, heerkulka iwm waxa uu baniaadamku adeegsdaaa habka sal-10.

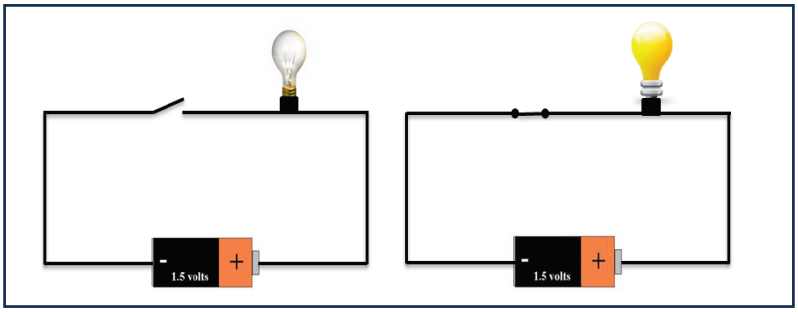
Tirooyinka sal-10 waa: 0,1,2,3,4,5,6,7,8,9

Si aan u fahamo habkaan sal labada waxa aan sameynaynaa tijaabadaan soo socota.

Waxqabadka 1aad:

Tijaabo

Qalabka aan u baahanahay: Nal, fiilo, bateri (1.5V). Waxa aan u xirayaa mareegta sida sawirka ka muuqata.



Labada sawir ayaan fiirinayaa aniga oo isweydiinaya:

Maxay labada sawir ku kala duwan yihiin: marka ay mareegtu xiran tahay iyo marka ay mareegtu furan tahay? Waxaa buuxinayaa jadwalka aniga oo adeegsanaya baaqa ah:

0 = nal dansan 1=Nal shidan

Nooca Mareeta	Nalka	Summad
Xiran	Shidan	----------
Furan	Dansan	----------

Tijaabadaan waxa aan ka fahmay in:

Danab (Korontadu) leeyahay laba xaaladood: marka ay mareegtu Xiriirto oo nalku shidan yahay, oo u taagan tirada: 1 iyo marka ay mareegtu furan tahay, nalkuna dansan yahay, waxa aana u taagan tirade: 0

Maadaama komiyuutarku ku shaqeeyo danab (kornoto), waxa uu adeegsada labada xaaladood oo korontada oo ah mid furan (0) iyo mid xiran (1). Habka uu kombiyuutarku uu adeegsado oo ka kooban (0), (1) ayaa loo yaqaan habka sal – 2 (binary). Habkaas ayuu kombiyuutarka ula dhaqmaa xogta.

Waxqabadka 2aad:

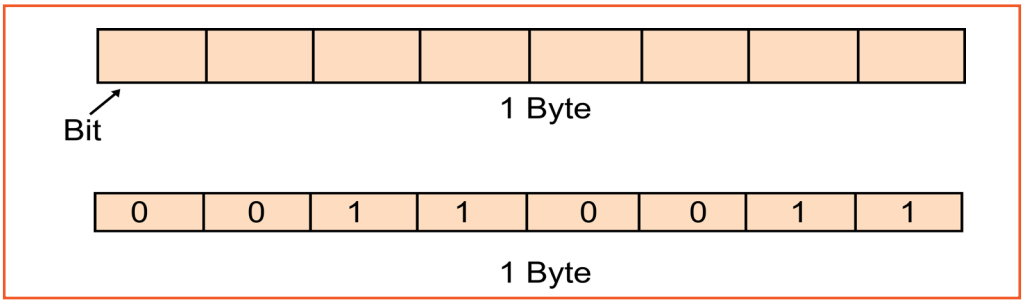
Cilmi baaris

Waxa aan baarayaa aniga iyo saaxiibkey habab kale oo kombiyuutarku adeegsado oo aan ahayn midka sal labada (Binary) ku dhisan.

J. Halbeegyada Bit iyo Byte

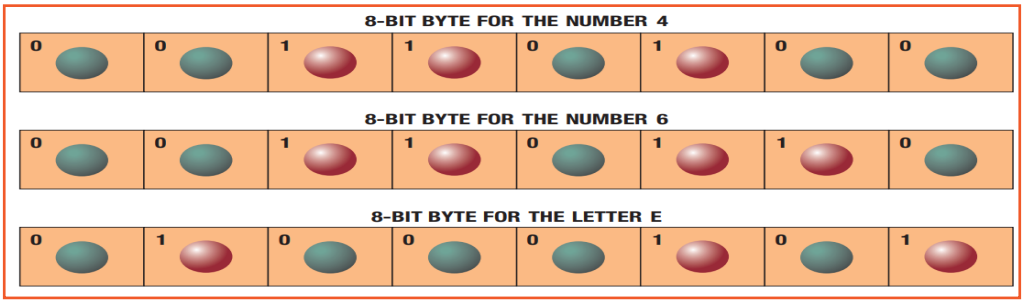
Halbeegyada loo adeegsado nolol maalmeedka way badan yihin. Tusaale ahaan Halbeegga dhererka waa mitir (m), halbeegga cufka waa Kilogram (Kg).

Sidaas oo kale kombiyuutarku waxa uu leeyahay halbeegyo. Halbeeygayada ugu yare ee kombiyuutarka xogtiisa lagu cabbiro waa bit (Binary Digit) iyo Byte. Bit waa hal god oo ah eber (0) Byte waa siddeed god ama 8 bit.

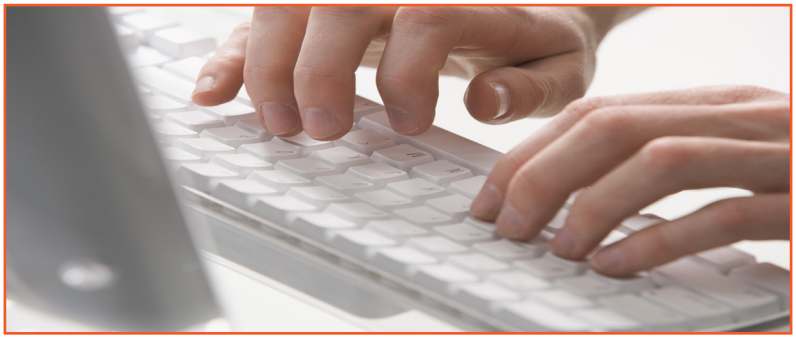


Dhammaan xeerarka xogta kombiyuutarka waxaa lagu muujiyaa **Byte.** Tusaale ahaan xarafka **A** Byte ahaan waxa uu u taagan yahay 01000001, xarafka **B** waxaa Byte ahaan loo qoraa: 00111001 ayadoo la isticmaalaayo Xeerka qoraalka (coding schema). Sidoo kale Nambarka waxa uu u dhigmaa , halka Nambarka sidoo kale uu u dhigmo . Xarafka weyn E waxa uu u dhigmaa . Waxa aan halkaas ka fahmaynaa in dhammaan xarfaha (sida B, T, J … iwm), tirooyinka (sida 0, 1, 2, … iwm) iyo calaamaha gaar ah (sida $, &, #, @, # iwm) ay leeyihiin u dhigan Byte Namber ah

oo ka kooban 0 iyo 1, sida xaraf ka 00110110 ay E ugu dhigantay. Shaxda hoose waxaad sidoo kale ku aragtaa u dhiganka Byte number ee tirooyinka 4 iyo 6.



Haddii aad garaacdo xarafka **A** ee ku yaal looxa furayaasha (keyboard) waxaa fiilooyinka looxa xarfaha ay u gudbiyaan kombiyuutarka sideed bit (1byte), kombiyuutarku wuu shaandheeya, waxa aana ka soo muuqda shaashadda xarafka A.



Jadwalka soo socda waxa uu muujinayaa halbeeyada ugu muhiimsan iyo dhufsanayaashooda (units and multiples)

Halbeegga	**Summad**	**Qiyaas ahaan Tirada Bytes**	**Qiimaha Lambarka saxda ah ee Bytes**	**Qiyaas ahaan Tirada Bogagga qoraalka**
Bit	Bit	Halbeega ugu yar: 0 ama 1	Halbeega ugu yar: 0 ama 1	
Byte	Byte	8 bit ama hal xaraf	8 bit ama hal xaraf	
Kilobyte	KB	1 kun	1024 kiloByte	½
Megabyte	MB	1 milyan	1,048,576	500
Gigabyte	GB	1 bilyan	1,073,741,824	500,000
Terabyte	TB	1 tiriliyan	1,099,511,627,776	500,000,000

Habka loogu beddelo sal-10, sal -2

1. U qaybi tiradada 2
2. Soo qaado tirada saamiga (quotient) integerka
3. Keydso haraaga (0 ama 1) kaasoo ah habka binary-ga
4. Ku celi tillaabooyinka kore ee 1-3 ilaa saamigu uu la mid noqdo 0.

Tusaale 1. U bedel salka - 2 tirada ah

Furfuris:

2	18
2	9 , 0
2	4 , 1
2	2 , 0
	1 , 0

Adoo haraagii ugu danbeeyay ka bilaabaayo qor dhammaan haraayada, waxaa kuu soo baxaaya 10010, hore ka raaco inta god eek a dhiman sideeddi god ee loo baahnaa. Sidaas waxaa noogu soo baxaysa in Nambarka uu u dhigmaa tirada ah.

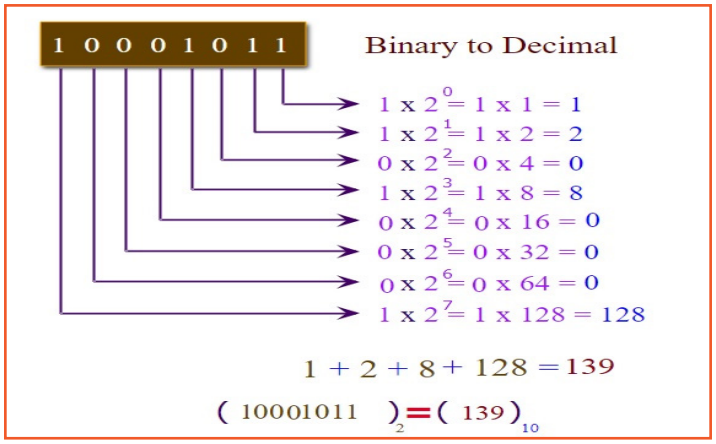
Habka loogu beddelo sal- 2, sal -10

1. Qor nambarka binary.

2. Laga bilaabo midig tira walba ku dhufo tirada 2 jibaaranaheedu yahay 0, ama 1, ama 2 ilaa 8, hadba sida ay bidix u kala xigaan sida ka muuqda tusaalaha 2 ee sawirka hoose

3. Ka dib samee wadarta guud ee tirooyinka kuu soo baxay, taas oo noqonaysa u dhiganka sal-10 ee tiradii ahayd sal-2

Tusaale 2. U bedel salka -10 lambar ka ah (10001011)2 Furfuris



Waxqabadka 3aad:

U beddel lambarka 126 sal-2

Waxqabadka 4aad:

U beddelka lambarka 10110100 sal – 10

Waxqabadka 5aad:

Waxa aan raadinayaa xarafka **D** sida loo qoro sal-2 ahaan waxa aan Ku buuxinayaa

Waxqabadka 6aad:

Waxa aan raadinayaa xarafka **G** sida loo qoro sal-2 ahaan waxa aan ku buuxinayaa

Gunaanad

Casharkaan waxa aan ku soo barannay:

- Waxa ay kala yihiin xogta iyo macluumaadka
- Kombiyuutarku waxa uu adeeqsadaa hab-tirin ka duwan bani'aadamka. Waxa uu adeegsadaa hab ku saleysan sal-2 (binary) oo ka kooban: 0 iyo 1.
- Maadaama komiyuutarku ku shaqeeyo danab (kornoto), waxa uu adeegsada labada xaaladood, mid furan (0) iyo mid xiran (1).

- Halbeeygayada ugu yar ee kombiyuutarka xogtiisa lagu cabbiro waa bit (Binary Digit) iyo Byte.

  Bit waa halgod oo ah eber (0) ama hal (1). Byte waa sideed god ama 8 bit.

- Isku beddelka lambarrada salkoodu yahay 10 iyo kuwa salkoodu yahay 2
- Haddi aad garaacdo xarafka **A** ee ku yaal looxa furayaasha (keyboard) waxaa fiilooyinka looxa xarfaha ay u gudbiyaan kombiyuutarka sideed bit (1 byte), kombiyuutarku wuu shaandheeya, waxa aana ka soo muuqda shaashadda xarafka **A.**

Layli

1. U beddel tirooyin so Socda Bit 2Byte, 8Byte, 1000Byte
2. U beddel tirooyin soo socda MB: 1024Byte, 48Byte, 72Byte
3. U beddel tirooyinka socda GB 1024000MB, 2048000 OMB, 3072000MB
4. Waa maxay Xiriirka ka dhexeeya marteegta korantada iyo xisaabta sal labo ee kombiyuutarku adeegsad.
5. Cilmi Baaris: U qor xarfah na soo socda sal labo ahaan

   Tusaale:

   A 01000001

   C. .....

   D.....

   F.....

   N.....

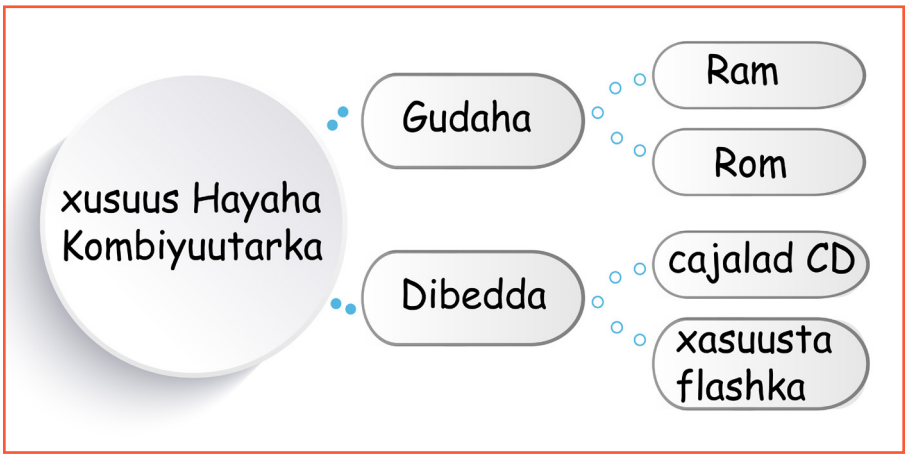
Su'aal: Maxaa loogu baahday in la kaydiyo xogta iyo macluumaadka?

Ujeeddooyinka

Dhammaadka casharkaan bare-ardaydu waxa ay awood u yeelanayaan in ay:

1. Sharaxi karaan xusuusta gudaha iyo qalabka loo adeegsado
2. Sharaxi karaan xusuusta dibadda iyo qalabka loo adeegsado.
3. Qori karaan halbeegyada xusuus-hayayaasha kombiyuutarka.
4. Kala saari karaan noocyada xusuus-hayaha kombiyuutarka.
5. Sharaxi karaan aaladaha kaydinta kombiyuutarka
6. Kala garan karaan noocyada kala duwan ee kaydinta xusuusta flash: Cajaladaha adag (solid state drive), kaararka xusuusta (memory card), USB flash drives. Diskiga adag (hard disk drive) ee gudaha iyo midka banaanka (external) laga saari karo.
7. Isticmaalaan aaladaha keydinta ee shabakadda internetka

Si loo kaydiyo xogta iyo macluumaadka waxaa la adeegsadaa kombiyuutarka ama aaladaha kaydinta. Xusuus-hayaha kombiyuutarka waxa uu u kala baxaa xusuusta gudaha iyo xusuusta dibedda.



Qeybaha Casharkaan aan ku baran doonno waxaa ka mid ah:

- Xusuuta Gudaha iyo qalabka loo adeegsado
- Xusuusta Dibadda iyo qalabka loo adeegsado.
- Halbeegyada xusuus-hayayaasha kombiyuutarka
- Noocyada xusuus hayayaasha kombiyuutarka.

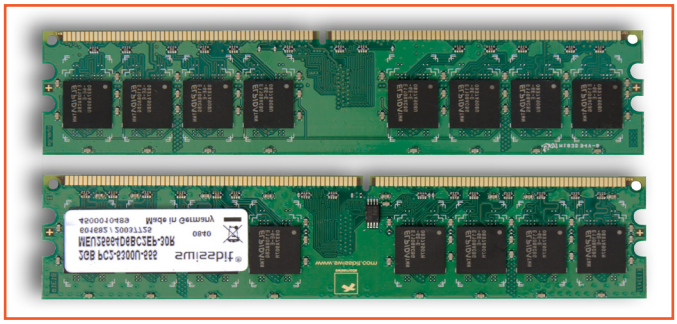
Xusuusta Gudaha

Xusuusta gudaha ee kombiyuutarka waxaa loo qaybiyaa laba qaybood oo kale ah: RAM (Random access memory) iyo ROM (Read only Memory)?

Waa maxay xusuus-haya RAM?

Waa xusuus-haya kaydiya xogta la adeegsanaayo marka uu kombiyuutarka shaqeynayo. RAM waxa uu hayaa nidaamka hawlgalka, barnaamijyada iyo xogta hadda la isticmaalayo.

Xogta iyo barnaamijyada lagu keydiyo xusuus-haya ee RAM way tirmaan marka kombiyuutarka la damiyo, sababtoo ah RAM waxa uu u baahan yahay koronto (tamar) joogta ah si uu u shaqeeyo.



Sawirka RAM

Xogta RAM-ka ku kaydsan waxaa halbeeg u ah megabytes (MB) ama gigabytess (GB). Mar ka uu RAM-ku qaadi karo xog badan, shaqooyin hadan ayuu kombiyuutarku hal mar isla qaban karaa, Haddii RAM-ku kaydintiisu yar tahay, kombiyuutarku waxa uu nagonayaa mid culus oo daaha haddii shaqooyin badan hal mar loo diro.

Waa maxay xusuus-haya **ROM?**

Waa xusuus-haye ay ku kaydsan tahay xog joogta ah oo shirkaddii soo Saartay ku soo kaydisay. Xogta ku kaydsan xusuus-haya ROM ma tiranto marka kombiyuutarka la damiyo. Xogta ku kaydsan ROM waa la akhrin karaa laakiin si sahlan looma tiri karo. ROM waxaa ku kaydsan xogta uu u baahan yahay kombiyuutarka marka uu soo kacayo.

Sawirka ROM

Waxqabadka 1aad

Waxa aan is barbardhigayaa farqa u dhexeeya RAM iyo ROM

Waxqabadka 2aad:

Cilmi Baaris

Waxa aan soo raadinayaa oo soo qorayaa kayd-qaadka xusuus-haya RAM ee ku jira kombiyuutarka yaalla xaafaddeena ama Kan saaxiibkey (Waa meeqa MB ama GB?).

b. Hard Disk

Hard Disk waa xog kaydiyaha aasaasiga ah ee kombiyuutarka, waxa uuna ku jiraa gudaha kombiyuutarka. Waa meesha lagu keydiyo nidaamka hawlgalka (operating System), dokumentiyada iyo qormooyinka kale. Xog-kaydintiisu kuma xirna koronto oo si Joogta ah ayuu u hayaa xogta. Marka la kiciyo barnaamij ama la furo fayl waxaa la dhigaa RAM-ka, ka dib waxaa lagu keydiyaa Hard Disk.

Halbeegga xog kaydinta Hard Disk waa megabytes (MB) ama gigabytes (GB) iwm. Sawirrada soo socda waxaa ka muuqda noocyo ka mid ah Hard Disk ah.

Solid state Drives (SSD)

Solid state Drive (SSD) Waa xog kaydiyaha aasaasiga ee kombiyuutarka, waxa uuna u kaydiyaa qaabka xogta, amarrada iyo maclumaadka sida uu u kaydiyo "xasuusta flash". Cabir ahaan waxa uu la eg yahy 3.5 inches, 2.5 inches iyo 1.8 inches. **Solid state Drive** (SSD) waxaa adeegsada dhammaan noocyada kala duwan ee kombiyuutarada sida: kombiyuutarka shaqsiga (personal computers), laptopyada iyo servers-ka. Waxa uu kaydin karaa SSD-gu inta u dhexeeysa 16 GB ilaa 256GB iyo wax ka badan. Waxa uu 80 jeer ka xawaaro sareeyaa Hard Disk Drive (HDD).

Jadwalka soo socda wuxuju muujinayaa halbeeyada ugu muhiimsan iyo dhufsanayaashooda (units and multiples)

Summada	Qiyaastii tiradada Bytes	Qiimaha Lambarka saxda ah ee Bytes
Kilobyte(KB)	1 kun	2^{10} ama 1,024
Megabyte(MB)	1 milliyan	2^{20} ama 1,048,576
Gigabyte(GB)	1 billiyan	2^{30} ama 1,073,741,824
Terabyte(TB)	1 tiriliyan	2^{40} ama 1,099,511,627,776
Petabyte(PB)	1 quwadriliyan	2^{50} ama 1,125,899,906,842,624
Exabyte(EB)	1 quwantriliyan	2^{60} ama 1,152,921,504,606,846,976
Zettabyte(ZB)	1 sixtriliyan	2^{70} or 1,180,591,620,717,411,303,424
Yottabyte(YB)	Sebtriliyan	2^{80} or 1,208,925,819,614,629,174,706,176

Waxqabadka 3aad

Waxa aan baarayaa meesha uu ku jiro Hard Disk kombiyutarka aniga oo kaashanaya macallinka.

Waxqabadka 4aad:

Cilmi Baaris

Waxa aan soo qarayaa magacyada saddex shirkadood oo sameeya Hard Disk

t. Xusuusta dibadda

Xusuusta dibadda waxa ay leedahay keydin joogta ah oo aan ku xirnayn korontada. Waa aalad qofku qaadan karo, waxa aana lagu xiraa kombiyuutarka marka loo baahda in xog lagu kaydiyo.

Waxaa ka mid cajalada (CD iyo DVD), Xusuuta-Falaashka iyo kuwa kale. Sawiradaan hoose waxa uu muujinaayaa qaar ka mid ah aaladaha Xusuusta dibadda

Xasuus hayaha kombiyuutarka waxaa lagu kaydin karaa noocyada kala duwan ee xogta sida tirooyinka, qoraalada, sawirada, codka, filimada fiidiyowga.

Xasuus – hayaha dibadda waxaa ka mid ah:

1. **Hard disk –ga Dibadda**

Waxaa Hard disk gacanta lagu qaadi karo laguna xariiriyo kombiyuutarka ayada oo la adeegsanaayo marinka USB.

2. **Xusuus-hayaha "Falaash" – ka**

Waa aalada yar oo leh xusuus lagu kaydiyo xogta iyo macluumaadka, waxa aana lagu xariiriyaa kombiyuutarka. Falaashku waxa ay leedahay awood kaydin kala duwan, waxa aana ku socda horumarin joogta ah si ay u keydiso xog mug weyn,

waxa ay leedahay noocyo kala duwan sida kuwa ka muuqda sawirka hoose.

Markii ugu horreysay "flash" –ka waxaa la soo saaray bilowgii 1980 naadkii. Xasuus-haya flash waxaa aad lagu adeegsadaa baabuuta, Kaamarooyinka, mobayladda iyo qalab kale oo tira badan.

Waxqabadka 5aad:

Waxaa aan qoranayaa kayd-qaadka dhawr nooc oo ka mid ah xasuus-haya flash-ka aniga oo adeegsanaya halbeegga gigabytes (GB)

Waxqabadka 6aad:

Waxaa aan saaxiibkey la wadaagayaa qalab kale oo loo adeegsado xasuus hayaha falaashka (oo aan ahayn kuwa casharka la soo sheegay)

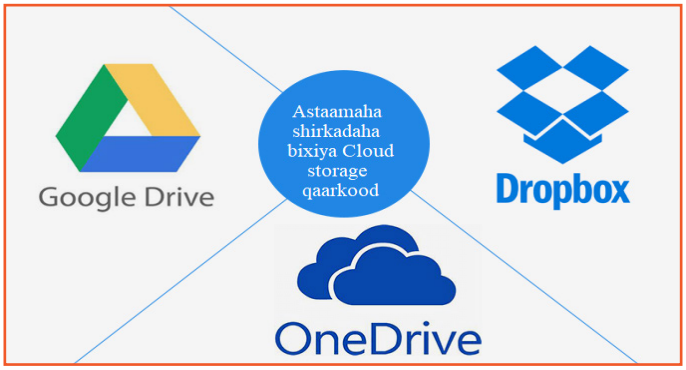
j. Kaydka Daruuraha (Cloud storage)

Kaydka Daruuraha (Cloud storage) waa adeeg internetka taas oo adeegsadayaashu ay ku kaydsanadaan xogtooda Server fog. Dadka inta badan waxa ay ku kaydsadaan: faylasha sida sawirada ama fariimaha emailka iyo faylal kale.

Faa'iidooyinka Kaydka Daruuraha (Cloud storage) waxaa ka mid ah:

1. Waxaa ay yaraysaa kharshyada ra'samaalka ee lagu soo iibin lahaa qalabka (Hardware) ee la dhigi lahaa goobta maxalliga ah.
2. Waxa ay fududaysaa in haddii howlaha hay'addu ballaartaan, si fudud loo dabooli karo baahida soo kororta, ayadoo loo kordhinaayo kaydka loo gaaryeelay.

3. Waxaa goobti la doono laga samayn karaa Kaydin guud (Backup) iyo dib u soo celin (Restore) ayadoo la isticmaalaayo kombiyuutar internet leh.
4. Xogta waxaa lagu kaydin karaa daruuraha (server-ka fog) sida caadiga ah 15 daqiiqo gudahood, taas oo yareynaysa khasaaraha xogta ee xaaladaha musiibada.



Jadwalka hoose waxaa ka muuqda magacyada bixiyayaasha Cloud Servers-ka, noocyada xogta ay kaydiyaan iyo adeegyada kale ee ay bixiyaan.

Magaca mareegta	Nooca xogta ay kaydiyaan	Adeegyada kale ay bixiyaan
Box.net, IDrive, Windows Live SkyDrive	kaydinta nooc kasta oo fayl ah	
Flickr, Picasa	Sawirada digital-ka	Bedelidda iyo maamulida sawirada
YouTube	Fiidiyoowga digital-ka	
Facebook, MySpace	Sawirada, fiidiyoowga, fariimaha, xogta shaqsiga	Barasha bulshada (social networking)
Google Docs	Dokumentiga (word), spreadsheet (excel), presentation (PowerPoint)	Productivity suite
Gmail, Windows Live Hotmail, Yahoo! Mail	Fariimaha emailka	
Amazon EC2, Amazon S3, Nirvanix	Kaydinta xogta shirkada waa wayn	Web services, data center services

Gunaanad

Casharkaan waxaa ku soo barannay

- Xusuusta gudaha ee kombiyuutarka waxaa loo qaybiyaa laba qaybood oo kale ah: RAM (Random access memory) iyo ROM (Read only Memory)?
- RAM waa xusuus-haya kaydiya xogta la adeegsanaayo marka uu kombiyuutarka shaqeynayo,
- ROM waa xusuus-haye ay ku kaydsan tahay xog joogta ah oo shirkaddii soo saartay ku soo kaydisay.
- Hard Disk waa xog kaydiyaha aasaasiga ah ee kombiyuutarka, waxa uuna ku jiraa gudaha kombiyuutarka.
- Xusuusta dibadda waxa ay leedahay keydin joogta ah oo aan ku xirnayn korontada. Waxaa ka mid cajaladaha (CD iyo DVD), Xusuuta-Flaashka iyo kuwa kale
- Xusuus-hayaha Flashka waa aalad yar oo leh xusuus lagu kaydiyo xogta iyo macluumaadka, waxa aana lagu xiriiriyaa kombiyuutar ka
- Hard Disk: Waa qeybta kaydka asaasiga a kombiyuutarka gudahiisa, waana aalad xusuus haya ah oo ku jirto kombiyuutarka gudihiiso si joogta ahna wax u kaydiso.
- Hard Disk waxa uu u kala baxaa laba nooc oo kala ah qudaha iyo dibadda.

Layli

1. Sheeg faraqa u dhexeeya RAM iyo ROM.
2. Waa maxay noocyada xusuusta-Flashka.
3. Sheeg walxaha ay uga badalan fahay xusuusta-flashka aaladaha kale ee kaydinta.
4. Qor noocyada Hard Diskiga iyo adeesigooda.
5. Aaladaha soo socda u kala saar xusuus haya gudaha iyo dibadda
   - ROM …….....……..
   - Xusuuta-Flashka .....
   - RAM :……
   - Cajalada (CD) :……
6. Haddii aad kombiyuutar Soo gadaneyso, oo aad rabto uu dhakhso badan yahay, xusuus-haya tixgelinta u baahan waa kee?
7. Waa maxay halbeegyada loo adeeqsado xasuus-hayayaasha kombiyuutarka?

Casharka 3aad Bad-qabka iyo Ilaalinta Xogta

Su'aal: Xogaha iyo macluumaadku ma u baahan yihiin in la xifdiyo? Waayo?

Ujeeddooyinka Casharka

Dhammaadka casharkaan bare-ardaydu waxa ay awood u yeelanayaan in ay:

1. Sheegaan khatarada ku wajahan xogaha iyo macluumaadka
2. Sharraxaan jiritaanka Fayrasyada iyo lid-Fayrasyo
3. Sharraxaan sida fayraska uu waxyeello ugu gaysto dukumentiyada ku jira kombiyuutarka
4. Tusaale ka bixin karaan sida ugu fudud ee ay uga ilaalin karaan kombiyuutarka fayras
5. Sheegi karaan astaamaha lagu yaqaanno marka uu kombiyuutarku fayras galo
6. Sharrixi karaan waxa uu yahay afgarasho
7. Tusaale ka bixin karaan sida haboon ee afgarasho loo sameeyo
8. Sharxi karaan faa'iidada afgarashada u leedahay kombiyuutarka
9. Sharxi karaan sida haboon ee loo ilaaliyo xogta iyo macluumaadka

Waxaa casharadi 1aad iyo 2aad ee cutubkan ku soo baratay in xog ay tahay macluumaad cayriin ah oo aan la kala shaandheyn. Waxaa kale oo ku soo baratay in macluumaadku yahay xog la shaandheeyey oo loo baddelay wax macho gaar ah sameynaya.

Xogta kombiyuutarka waxa ay yeelan kartaa qaabab kala duwan sida qoraal, sawir iyo maqal ama muuqaal. Waxaa lagama maarmaan ah in la ilaaliyo xogtaas, lagana dhawro in ay tiranto, beddelanto, ama uu qaato cid aan loogu talagelin.

Internetka gaar ahaan baraha bulshada waxaa ka buuxa dad badan oo aan lagu aamini karin xogta kombiyuutarka sidaa darteed waxaa lagama maarmaan ah in

la helo hab iyo nidaam lagu ilaaliyo xogta.

Bangiyada, xawaaladaha, jaamacadaha, dugsiyada, shirkadaha iwm waxa ay hayaan xogta macaamiishooda sidaa awgeed waa in la helaa hab lagu xafido xogtaas gaarka ah. Waxaa jira faylal ama barnaamijyo waxyeelleeya xogta iyo macluumaadka kombiyuutarka, haddaba waxaa loo baahan yahay in laga gaashaanto oo difaac laga sameysto.

Casharkaan waxa aan ku baranayaa

Sida loo xafido xogta iyo macluumaadka ku jira kombiyuutarka.

b. Waa maxay Fayras (Virus)?

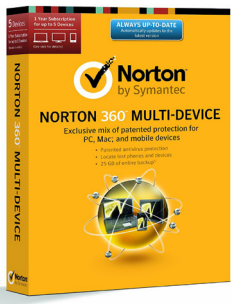
Fayraska kombiyuutarku waa barnaamij waxyeello geysta, wax ka beddela xogta iyo macluumaadka, dira e-mail, fariimo muuqaal ah ama hawlahaas qaar ka mid ah oo wada jira.

Waxaad uga ilaalin kartaa kombiyuutarkaada in fayras uu galo adiga oo ku shubaya barnaamij ah lidka-fayrus (Anti-Virus). Marka lagu shubo barnaamijkaas kombiyuutarka waxa uu ka hortagaa oo uu hubiyaa in fayrus uu soo galo. Haddii uu arko wax leh astaan fayrus waxa uu bixiyaa diginin, ama fayruska ayuu takooraa ama ka tiraa kombiyuutarka.

Astaamaha lagu yaqaan marka uu fayrus kombiyuutar galo waxaa ka mid ah:

1. Xawaaraha hawl qabashada kombiyuutarka oo yaraada.
2. Hard disk kombiyuutarka oo waxyeello gaarto.
3. Nidaamka hawlgalka (operating sytem) oo shaqeyn waaya.
4. Sanduuqyo farriimo ah oo soo noqnoqda ama soo bood booda.
5. Barnaamijyo aadan dalban oo iskood u furma.

Barnaamijyada lid-fayraska ah kuwa ugu caansan waxaa ka mid ah kuwa ka muuqda siwirada hoose:



Waxqabadka 1aad:

Waxa aan isbarbardhigayaa faraqa u dhexeeya fayras iyo lid-fayras?

Waxqabadka 2aad:

Cilmi Baaris: Waxaa soo qorayaa shan barnaamij oo ah lid-fayras oo ka duwan kuwa casharka aan ku soo qaatay.

t. Afgarasho (Password)

Xafidaadda xogta waa lagama maarmaan. Hababka xogta lagu ilaaliyo waxaa ka mid in afgrasho (password) loo sameeyo faylasha iyo kombiyutarka. Afgarashadu waa in ay ahaato mid u gaar ah dadka hawsha leh ama kombiyuutarka wadaaga.

Waxaa habboon in:

- Erayga afgarashada laga dhigayo uusan ka yaraan siddeed xaraf oo ka kooban xuruuf, tirooyin iyo summado. Sida: @, ! -, %, *, &, +, (.), #, ; waayo way adag tahay in la maleeyo ama la gudbo afgarasho iskudhiskaas leh.

- Si kalgal (usbuucle ama bille) ah loo beddelo afgarashada.
- Marka aad afgarshada qoraysid uusan arag qoraalkaada qof aan loo oggoleyn.
- In aad ku qoroto afgarshada meel kuu gaar ah si aad dib ugu xusuusato haddii aad illowdo.
- Haddii aad ka tageyso kombiyuutarka dabar (lock) ama dami kombiyuutarka.
- Baraha bulshada marka aad booqaneyso, iska ilaali in aad macluumaad la wadaagto dad aadan aqoon.

Waxaa habboon in aadan afgarsho ka unkin (sameyn):

- Magacaaga ama naaneystaada
- Sanadka ama meesha aad ku dhalatay
- Teleefoonkaaga
- Xaafadda ama magaalada aad deggan tahay.

Waxqabadka 3aad:

Waxa aan qorayaa afgarsho ay adag tahay in la saadaaliyo kadibna saaxiibkey ayaan weydiinayaa in uu maleeyo afgarashadaas.

Waxqabadka 4aad:

Waxa aan qorayaa afgarsho ka kooban: labada xaraf dambe ee magacayga + Magaca bisha la joogo + @ #) + labada xaraf ee magaalada aan joogo.

Gunaanad

Waxa aan ku soo bartay casharkaan:

- Fayraska kombiyuutarku waa barnaamij waxyeello u geysta habsami u socodka hawlaha kombiyuutarka.
- Lid-fayras waa barnaamij ka difaaca kombiyuurka fayrasyada.
- Noocyo kala duwan oo lid-fayrus ayaa suuqa yaalla, waxaa ka ka mid ah:

Norton, Macfee, Kaspersky, Symantec, Avast iyo Bitdefender.

- Hababka xogta lagu ilaaliyo waxaa ka mid in afgrasho (password) loo sameeyo faylasha iyo kombiyuutarka.
- Erayga afgarashada laga dhigayo waxaa habboon in uusan ka yaraan siddeed xaraf oo ka kooban xuruuf, tirooyin iyo summado (@-! - % - *-&-+- (-) -#).
- Haddii aad ka tageyso kombiyuutarka dabar (lock) ama dami kombiyuutarka.
- Xafidaadda xogta macaamiisha waa ammaano adag oo u baahan in la dhawro.

Layli

Ka jawaab su'aalaha soo socda

1. Sidee ayuu fayras ugu gudbi karaa kombiyuutar?
2. Waa maxay dhibaatooyinka uu fayrasku u geysto kombiyuutarka?
3. Magacow afar ka mid lid-fayrasyada ugu caansan dunida?
4. Cimli Baaris: Mobaylkaada fayras ma geli karaa? Sidee?
5. Samee afgarsho adag oo aan si fudud loo saadaalin karin.
6. Shirkadaha, jaamacadaha iwm waxa ay hayaan xog muhiim ah. Haddii mid ka mid ah mas'uul lagaaga dhigo sidee u xafidi lahayd xogtaas?
7. Waa maxay habka ugu fiican ee aad ku ilaalin karto xogta kombiyuutarkaaga haddii aad rabto in aad meel dhaw gaarto ama aaddo?

Qiimaynta Cutubka

Ka Jawaab su'aalahaan:

1. Sharax waxa ay ku kala duwan yihiin habka tirinta sal toban iyo sal labo
2. Isbarbar dhig ku samee Bit iyo Byte.
3. U beddel tirada 35 oo sal 10 ah tirada sal 2 ee u dhiganta. Sidoo kale tirada 10011001 oo sal 2 ah u badel u dhigankeeda oo sal 10 ah
4. Isbarbar dhig xusuusta gudaha iyo qalabka loo adeegsado; iyo xusuusta dibadda iyo qalabka loo adeegsado.
5. Qoraal kooban ka diyaari noocyada xusuus-haya kombiyuutarka.
6. Maxay kala yihiin noocyada kala duwan ee kaydinta xusuusta ee soo socda: flash, Cajaladaha adag (solid state drive), kaararka xusuusta (memory card), USB flash drives. Diskiga adag (hard disk drive) ee gudaha iyo midka banaanka (external) laga saari karo.
7. Waa maxay faaiidooyinka isticmaalka aaladaha keydinta ee kaydka Daruuraha (Cloud storage)
8. Sheeg macnaha fayras? Sharax kooban ka bixi waxyeellada uu u gaysto fayrasku kombiyuutarka
9. Tusaale ka bixi sida xogta iyo kombiyuutarkaba looga ilaalin karo fayraska
10. Sheeg waxa ay tahay afgarsho? Tusaale ka bixi sida loo sameeyo afgarasho habboon iyo faa'iidada ay leedahay

Hordhac

Qalabka kombiyuutarka (Computer Hardware) waxaa loola jeedaa qeybaha jireed ee kombiyuutarka. Kombiyuutarka wuxuu ka kooban yahay qeybaha gudaha oo kala duwan, sida: looxada (**Looxada), Maskaxda** (Central processing unit (CPU)), xasuusta (memory), cajaladaha wax kaydiya (disk drives), iyo unugga korontada (Power supply unit). Si nidaamka kombiyuutarka uu si sax ah u shaqeeyo, qayb kasta oo ka mid ah kombiyuutarka waa in si habboon loo rakibaa loona habeeyaa. Si loo rakibo, waa in qofku leeyahay aqoon ku saabsan qaybtaas iyo habka rakibidda. Qeybaha aan sare ku soo xusnay qaarkood waxaan ku soo barannay cutubyada labaad (2) iyo seddexaad (3) ee buuggan. Waxaan cutubkan ku baran doonnaa qaybo kale oo muhiim u ah Qalabka Kombiyuutarka.

Ujeeddooyinka Cutubka

Dhammaadka cutubkan bare-ardaydu waxa ay awood u yeelanayaan in ay :

1. Gartaan Qeybaha kala duwan ee Qalabka Kombiyuutarka
2. Fahmaan sida isugu xirxiranyahay qalabka kumbiyuutarka
3. Bartaan noocyada kala duwan ee ports-ka ama irdaha kumbiyuurtarka
4. Sharxi karaan noocyada drivers ama slots ku xiran mother board-ka
5. Fahmi karaan ciladaha hardware-ka ka dhasha
6. Gartaan noocyada shaashadaha kumbiyuurtarka iyo Pixels-ka ay leeyihin

Tusmada Cutubka

Cutubkaan waxaa uu ka kooban yahay casharada soo socda:

Casharka 1aad: Qeybaha iyo godadka (ports) kala duwan ee Looxada-ka

Casharka 2aad: Boosaska looxada Iyo shaqooyinka ay qabtaan

Casharka 3aad: Ciladaha hardware-ka ka dhasha iyo sida loo xaliyo

Casharka 4aad: Shaashadaha kala duwan iyo hagaajintooda

Habka Waxbaridda

1. **Dood ku saabsan noocyada iyo farqiga u dhexeeya xogta iyo macluumaadka**
   In kasta oo casharku yahay "Barashada Hardware", doodan waxaa loo adeegsadaa sidii hordhac kor u qaadaya fahamka ah sababta hardware-ku muhiim ugu yahay maaraynta xogta iyo macluumaadka.

2. **Koox-koox iskula weydiiya uguna dooda mawduuca**
   Ardayda waxaa loo qaybiyaa koox-koox si ay uga doodaan noocyada hardware-ka (input, output, processing, storage) iyo doorkooda ku aaddan maaraynta xogta.

3. **Ka shaqeynta tusaalooyin ku saabsan sida leysku beddelo Bit (bit) iyo Byte (baayt)**
   Tani waxay caawisaa ardayda inay fahmaan sida hardware-ku u xisaabiyo uguna kaydiyo xogta, iyadoo la adeegsanayo unugyada xogta (bits/bytes) si la taaban karo.

4. **Akhrinta buugaag dheeraad ah ee la xiriira mowduuca**
   Ardayda waxaa lagu dhiirrigelinayaa inay akhriyaan qoraallo iyo buugaag ku saabsan qaybaha kombiyuutarka ee hardware-ka si ay u helaan faham buuxa.

5. **Su'aalo iyo Jawaabo**
   Waxaa la furaa dood su'aalo iyo jawaabo ah si ardaydu fursad ugu helaan in ay ka hadlaan wixii ay fahmeen ama su'aalo ka qabaan.

6. **Tusin (Practical)**
   Ardayda waxaa la tusayaa qaybo kala duwan oo hardware ah sida motherboard, RAM, CPU, hard drive, iyo sida ay ugu shaqeeyaan kombiyuutarka.

7. **Muuqaalo**
   Waxaa la daawanayaa muuqaallo waxbarasho oo sharxaya noocyada hardware-ka, shaqadooda, iyo sida ay ula falgalaan software-ka.

Casharka 1aad Qeybaha iyo godadka (ports) kala duwan ee Looxada-ka

Ujeeddooyinka

Dhammaadka casharkaan bare-ardaydu waxa uu awood u yeelanayaan in ay:

1. Aqoonsadaan qeybaha ugu waaweyn ee Looxada-ka iyo shaqooyinkooda.
2. Sharaxaan doorka godadka (ports) iyo isku xirayaasha Looxada-ka.
3. Tilmaamaan sida ay qeybaha Looxada-ku iskula shaqeeyaan si ay kombiyuutarku u shaqeeyo.
4. Gartaan boosaska balaadhinta (expansion slots) iyo muhiimada ay u leeyihiin cusboonaysiinta kombiyuutarka.

Hordhac

Looxada-ka waa qaybta ugu muhiimsan ee kombiyuutarka, waana meesha isku xirta dhammaan qeybaha kale sida Maskaxda, xasuusin, kaydinta xogta , iyo qalabka dibadda (peripherals). Si kombiyuutarku u shaqeeyo, dhammaan qeybaha Looxada-ka waa inay si sax ah iskula shaqeeyaan. Waxaa jira dhowr qaybood oo muhiim ah oo ku yaalla looxada sida chipset-ka, BIOS/UEFI, iyo boosaska balaadhinta (expansion slots) kuwaas oo u oggolaanaya in la ballaariyo awoodda kombiyuutarka.

Casharkan, waxaan diiradda saari doonnaa qeybaha ugu waaweyn ee Looxada-ka iyo godadka (ports) kala duwan ee lagu xiro qalab kale. Fahamka arrintan wuxuu muhiim u yahay qof kasta oo raba inuu wax ka barto dayactirka iyo kor u qaadista kombiyuutarka.

1. Looxada iyo Qaybahiisa Muhiimka ah

Looxada-ku waa sagxad weyn oo ku jirta gudaha kombiyuutarka ayna ku rakiban yihiin qalabyada elektrooniga. Qeybaha muhiimka ah ee gudaha kombiyuutarka sida Maskaxda (CPU), Xusuusta waqti gaaban (RAM) waxay si toos ah ugu xiran yihiin Looxada-ka iyada oo loo marayo godad ama sockets.

Looxada-ku wuxuu sidoo kale leeyahay tiro godad ballaarin ah oo loo qorsheeyay inay ku habboonaadaan kaararka dheeraadka ah sida kaararka fiidiyowga (VGA), kaararka isku xirka shabakaddaha (NICs), USB (oo loo isticmaalo qalab badan), HDMI (oo isku xira shaashadda), Ethernet (oo loogu talagalay internet-ka), iyo godadka codka (audio jacks) oo loogu talagalay makarafoonka iyo sameecadaha.

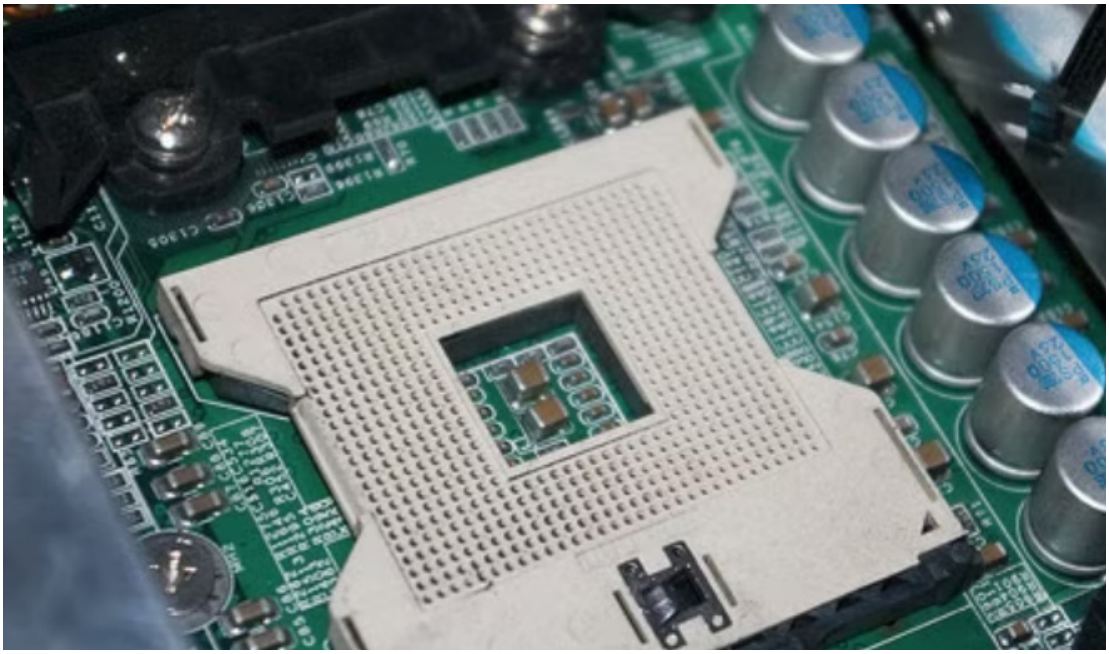
Fahamka qeybaha iyo godadka Looxada-ka wuxuu muhiim u yahay qof kasta oo raba inuu barto sida kombiyuutarradu u shaqeeyaan ama uu kor ugu qaado awoodda kombiyuutarkiisa.

Qaabdhismeedka gudaha ee Looxadaka iyo qaybahiisa waxay ka muuqdaan sawirka hoose.

a) Meesha CPU-ga lagu xiro

Waa meesha lagu rakibo maskaxda.

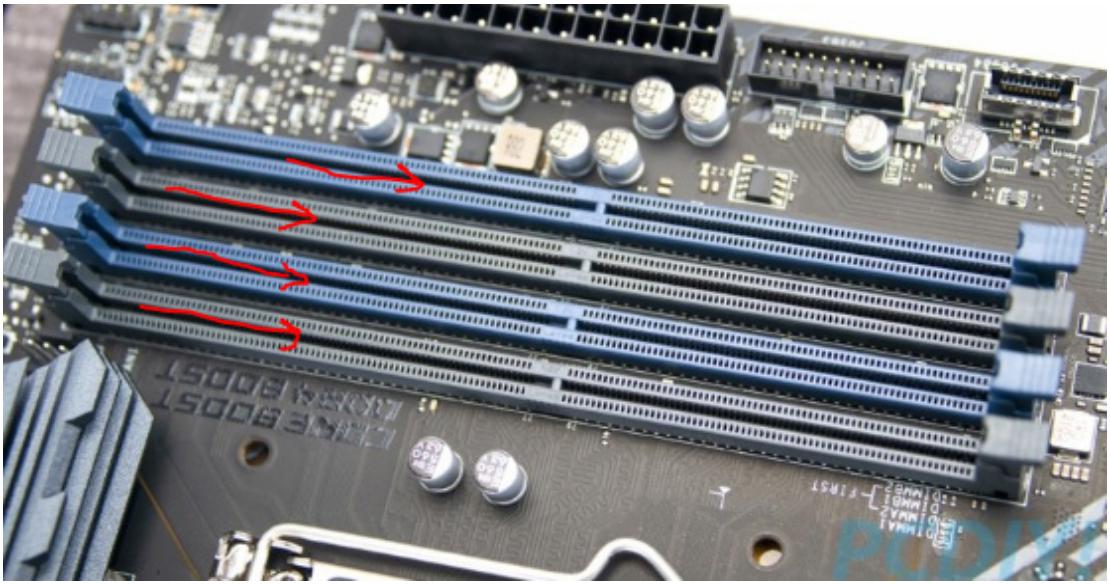
Noocyada processor-ka ee la isticmaali karo waxay ku xiran yihiin nooca socket-ka.



b) Meelaha kaarka Xasuusta RAM-ka lagu xiro

Waa boosaska lagu rakibo RAM si kombiyuutarku u xasuusan karo xogta si degdeg ah.

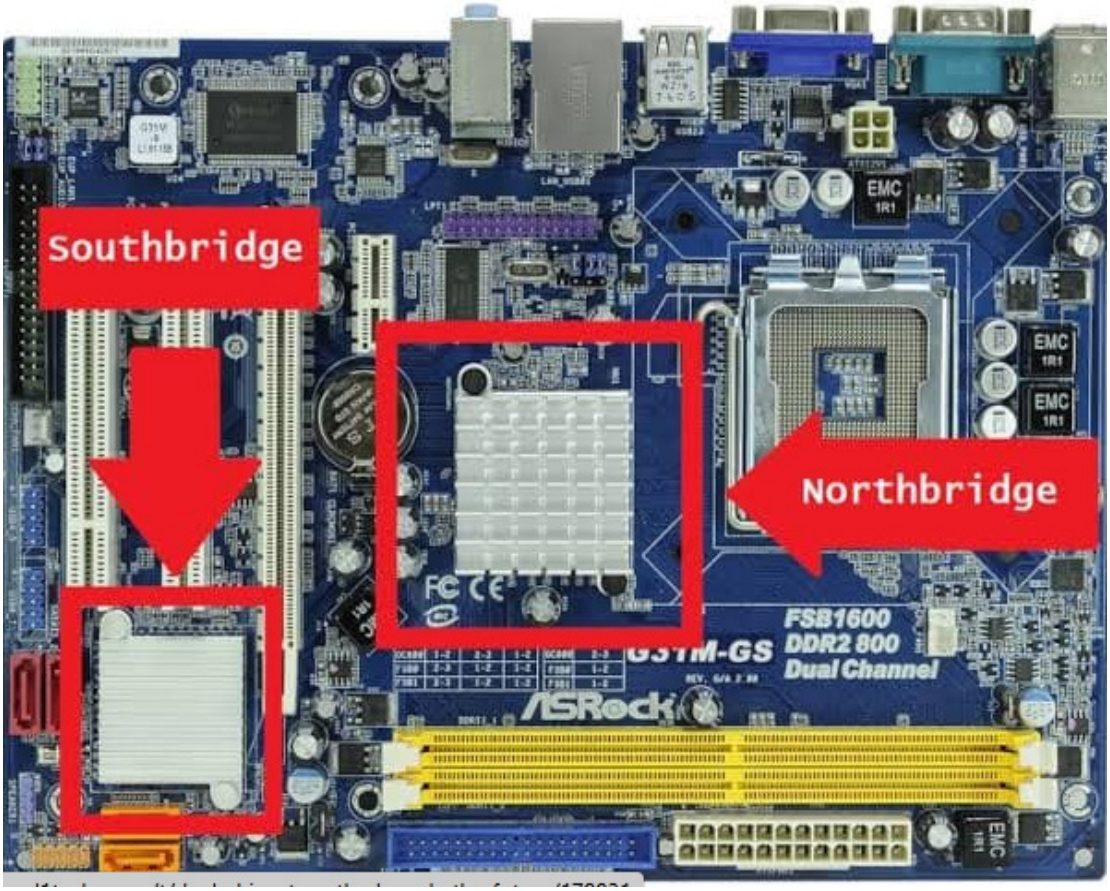
Looxada-ka wuxuu leeyahay ugu yaraan 2 ama ka badan boosaska RAM-ka.



c) Qalabka Xiriirka

Waa qayb ka caawisa CPU-ga inuu la xiriiro xasuusta, kaydinta, iyo qalabka kale.

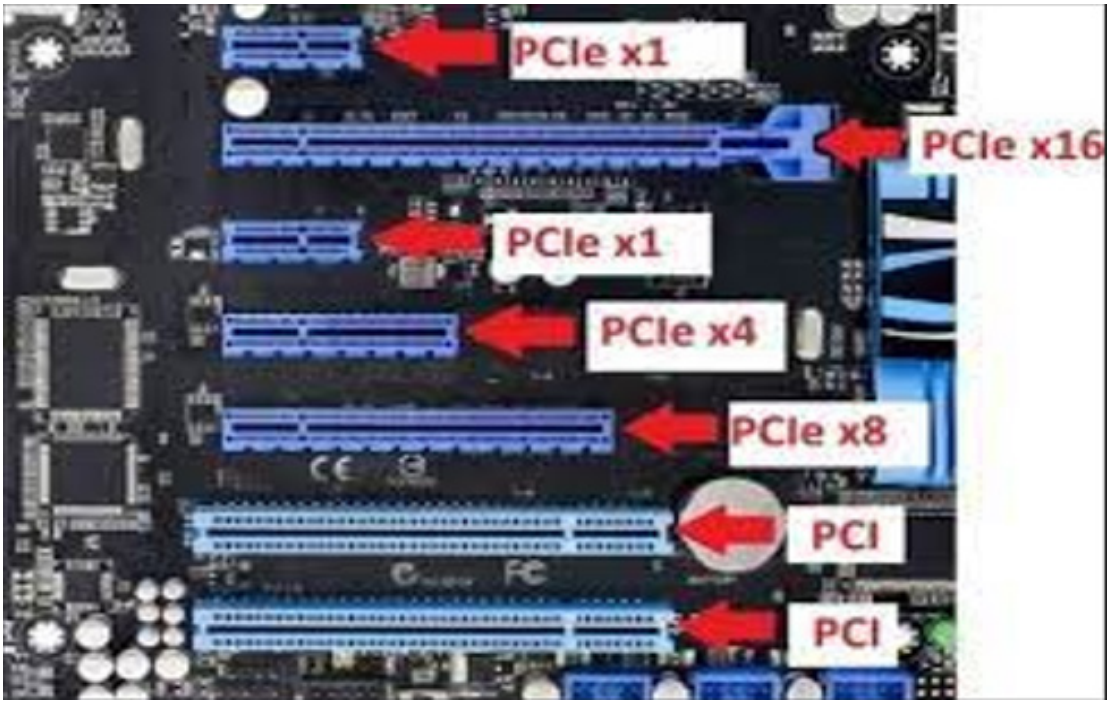
Waxaa loo kala saaraa cirifka waqooyi **(Northbridge)** iyo cirifka koonfureed **(Southbridge),** inkasta oo Looxada-yada cusub ay hal chipset isticmaalaan.



d) Boosaska Balaadhinta

Waxaa loo isticmaalaa in lagu daro kartida kombiyuutarka sida **karti muuqaal (graphics card), cod (sound card), ama Wi-Fi adapter**.

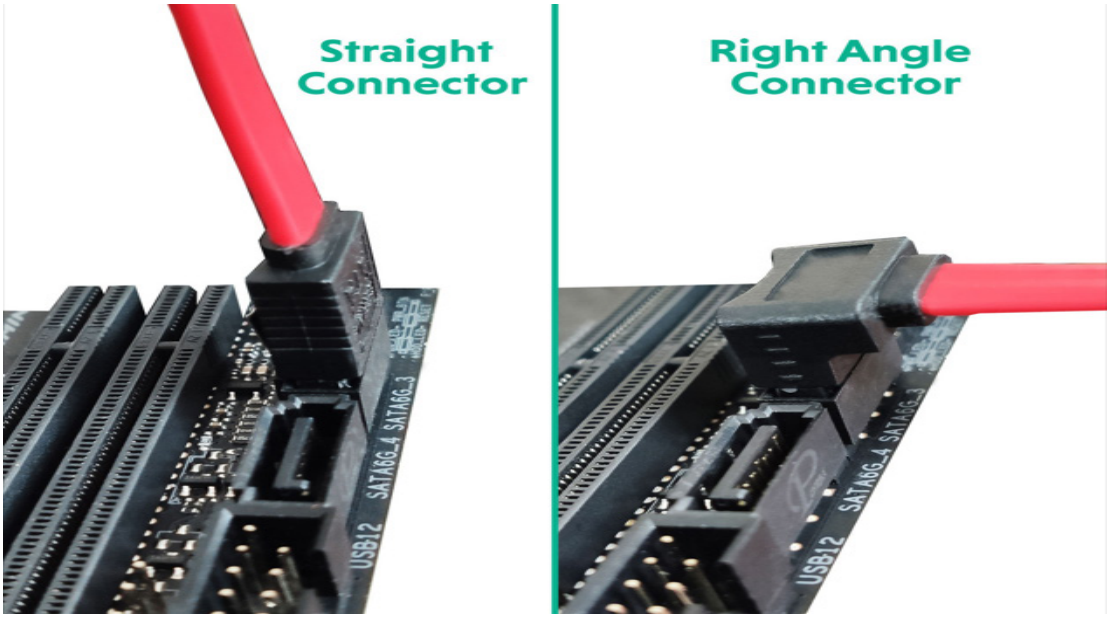
Noocyada ugu caansan waa **PCIe (PCI Express) iyo PCI**.



e) Isku Xirayaasha Kaydinta Xogta

Waa meesha lagu xiro hard drive-yada sida **HDD, SSD, iyo NVMe SSD**.

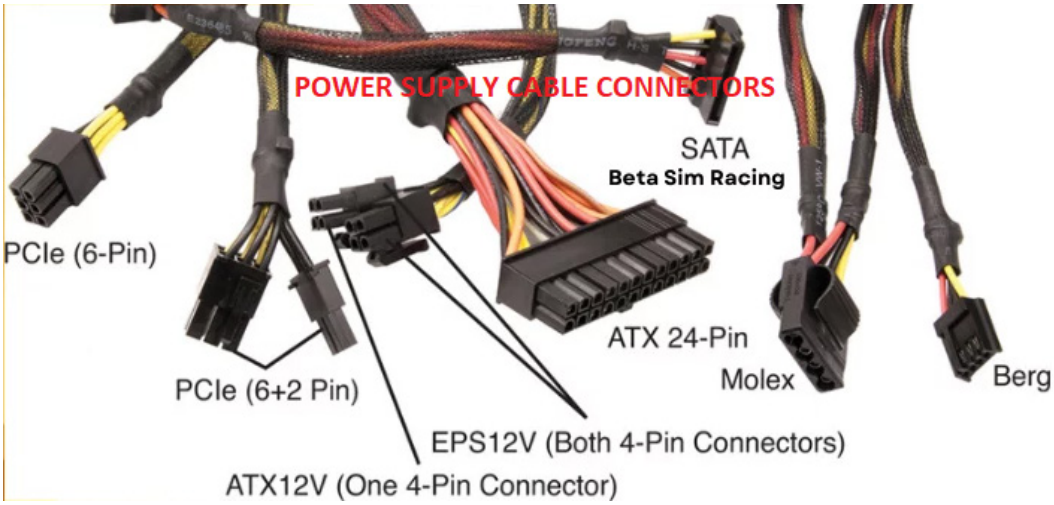
Noocyada ugu badan waa **SATA iyo M.2 connectors**.



f) Xiriiriyaha Korontada

Waa meelaha Looxada-ku uga baahan yahay koronto si ay qaybuhu u shaqeeyaan.

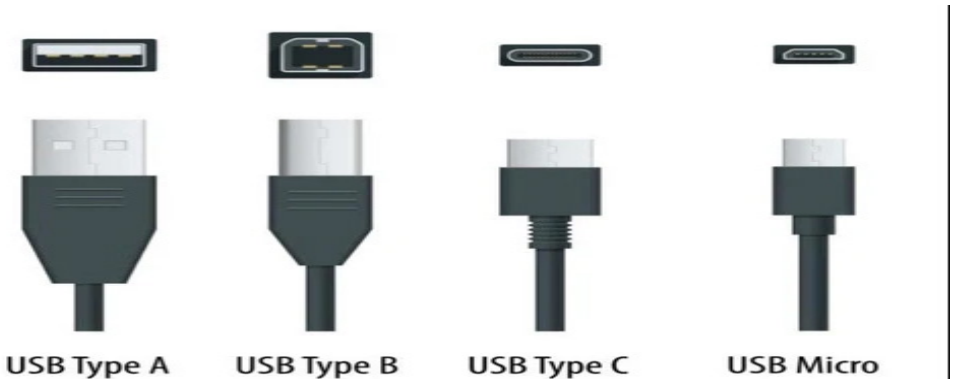
Waxaa ka mid ah **24-pin ATX connector** iyo **8-pin CPU power connector**.



2. Noocyada Godadka (Ports) ee Looxada

a) USB Ports (Universal Serial Bus)

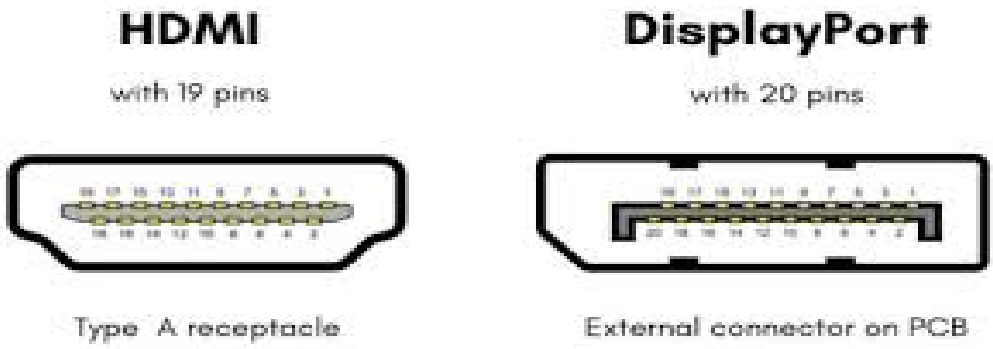
- Waxaa loo isticmaalaa in lagu xiro qalabka dibadda sida **keyboard, mouse, flash drives, iyo hard drives**.
- Noocyada caanka ah waxaa ka mid ah **USB 2.0, USB 3.0, iyo USB-C**.



b) HDMI & DisplayPort

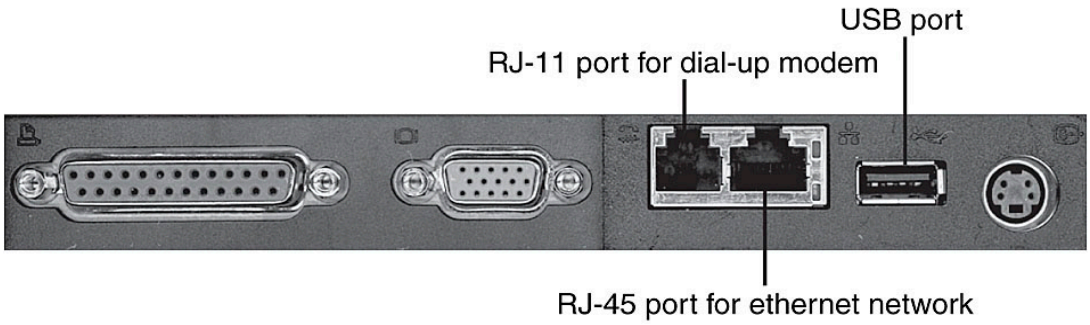
Waxaa loo isticmaalaa in lagu xiro **shaashadda (monitor)**.

HDMI waa midka ugu badan, halka **DisplayPort** uu si gaar ah ugu fiican yahay ciyaaraha (gaming) iyo shaqooyinka sare.



c) Ethernet Port (RJ-45)

Waa godka lagu xiro **xarig internet-ka (LAN cable)** si kombiyuutarku internet ugu xirmo.



d) Audio Ports (Godadka Codka)

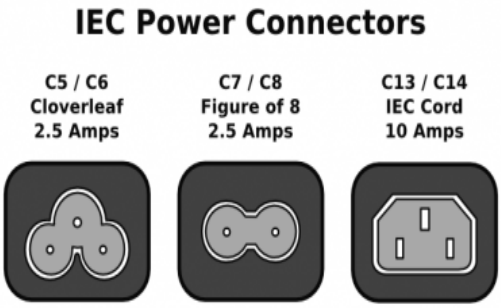
Waxaa loogu talagalay **sameecado, makarafoon, iyo qalabka codka kale**.

Waxaa jira **3.5mm audio jack** iyo **optical audio ports**.

Motherboard Audio Ports

e) Power Port (Godadka Koronto Gelinta)

Waa meesha laga xiro **adabtarada korontada**, PCs ama laptops-ka.



3. Muhiimadda Fahamka Looxada-ka iyo Godadkeeda

Waxay caawisaa dayactirka iyo hagaajinta kombiyuutarka.

Waxay fududeyneysaa in qofku fahmo qalabka uu isticmaalo.

Waxay u sahleysaa qofka inuu si sax ah u doorto kombiyuutar ama uu cusboonaysiiyo (upgrade).

Waxqabadka 1aad:

Magacaabista iyo aqoonsiga godadka Looxada-ka

Ujeeddo: Ardaydu waxay baranayaan magaca iyo shaqada godadka (ports) kala duwan ee Looxada-ka.

Hawlgalka:

1. Macallinku wuxuu keenayaa sawir weyn oo Looxada ah ama mid dhab ah.
2. Ardayda waxaa la siinayaa liis ay ku qoranyihiin magacyada godadka sida: USB, PS/2, VGA, HDMI, RJ-45, Audio, iyo godadka gudaha sida RAM slot, PCI, CPU socket, iyo power connectors.
3. Ardaydu waxay sawirka ama Looxada-ka ka tilmaamayaan meelaha ay ku yaalliin godadkan, waxayna sheegayaan shaqada mid kasta.

Waxqabadka 2aad:

Isku-xidhka Qalabka Dibadda (External Devices)

Ujeeddo: Ardaydu waxay baranayaan sida qalabka dibadda (peripherals) loogu xiro Looxada-ka.

Hawlgalka:

1. Ardayda waxaa loo qaybinayaa koox-koox.
2. Koox walba waxay helaysaa dhawr qalab oo dibadda ah sida keyboard, mouse, monitor, speaker, iyo cable ethernet.
3. Waxay isku xiraan qalabkaas iyagoo adeegsanaya godadka Looxada-ka, iyagoo sharaxaya sababta god kasta loogu xiro qalab gaar ah.
4. Waxaa lagu qiimeynayaa sax ahaanshaha isku xirka iyo fahamka shaqada godadka.

Waxqabadka 3aad:

Ka qayb qaadashada doodo kooxeed (group discussion)

Ujeeddo: Ardaydu waxay horumarinayaan fahamka qoto dheer ee godadka iyo isla shaqaynta Looxada-ka.

Hawlgalka:

1. Macallinku wuxuu dhiirrigelinayaa dood kooxeed ku saabsan: "Midkee ka muhiimsan: godadka gudaha (internal) mise kuwa dibadda (external)? Maxayse muhiimad gaar ah u leeyihiin?"
2. Koox walba waxay difaacayaan mowqifkooda iyadoo la adeegsanayo tusaalooyin laga helay Looxada-ka dhabta ah ama sawirkiisa.
3. Doodda kadib, ardaydu waxay soo bandhigayaan gunaanadyo ku saleysan fahamkooda.

Waxqabadka 4aad:

Ka shaqaynta worksheet/shaashad shaqo

Ujeeddo: Ardaydu waxay xaqiijinayaan fahamka shaqsiga ah ee godadka Looxada-ka iyagoo ka jawaabaya su'aalo.

Hawlgalka:

1. Ardayda waxaa la siiyaa worksheet ay ku qoran yihiin su'aalo kala duwan:
2. Waa maxay shaqada VGA port?
3. Halkee ayuu ku yaallaa CPU socket-ka?
4. Godkee ku habboon in lagu xiro mouse?
5. Ardaydu si shaqsi ah ayey u buuxinayaan, kadibna macallinku wuu hubiyaa ama kooxaha ayaa is-dhex-eegaya jawaabaha.

Gunaanad

Casharkan waxa aan ku soo barannay

Looxada-ku waa laf-dhabarta kombiyuutarka, waana meesha isku xirta dhammaan qeybaha kale. Fahamka qeybaha Looxada-ka iyo godadkeeda waxay qofka u fududeynaysaa isticmaalka, hagaajinta, iyo casriyeynta kombiyuutarka. Qof kasta oo doonaya inuu barto kombiyuutarrada waa inuu si qoto dheer u fahmaa Looxada-ka iyo sida ay qaybihiisu u shaqeeyaan.

Layli

Su'aalo ka turjumaya Casharka 1aad

1. Waa maxay Looxada, maxaase lagu magacaabaa af Soomaali ahaan?
2. Sheeg saddex (3) ka mid ah qeybaha ugu muhiimsan ee ku xiran Looxada-ka.
3. Waa maxay shaqada CPU socket-ka ku yaalla Looxada-ka?
4. Godka RAM-ka (RAM slot) muxuu yahay, maxaase lagu xiraa?
5. Farqi ma u dhaxeeyaa godadka dibadda (external ports) iyo godadka gudaha (internal ports)? Haddii ay haa tahay, sidee bay u kala duwan yihiin?
6. Sheeg afar (4) god oo dibadda ah (external ports) oo ku yaalla Looxada-ka oo ay ardaydu isticmaalaan maalin kasta.
7. Maxay tahay sababta ay muhiim u tahay in la fahmo meesha ay ku yaalliin godadka kala duwan ee Looxada-ka?

Casharka 2aad Boosaska looxada Iyo shaqooyinka ay qabtaan

Ujeeddooyinka

Dhammaadka casharkaan bare-ardaydu waxa uu awood u yeelanayaan in ay:

1. **Aqoonsadaan** noocyada kala duwan ee slots-ka ku yaal Looxada-ka.
2. **Sharaxaan** shaqooyinka ay qabtaan slots-yada Looxada-ka.
3. **Kala saaraan** noocyada expansion slots iyo doorkooda.
4. **Tilmaamaan** sida slots-yadu uga caawiyaan casriyeynta iyo hagaajinta kombiyuutarka.
5. **Gartaan** qalabka lagu rakibo slots-ka Looxada-ka sida GPU, Sound Card, iyo Network Card.

Hordhac

Slots-ka Looxada-ka waa boosaska ama godadka lagu rakibo qalabka dheeraadka ah si kor loogu qaado awoodda kombiyuutarka. Waxay ka caawiyaan kombiyuutarka inuu qabto hawlo gaar ah sida **aragti sare (graphics), maqalka (sound), iyo isku xirka shabakadaha (networking)**.

Looxada-yadu waxay leeyihiin noocyo kala duwan oo slots ah, kuwaas oo leh shaqooyin kala duwan. Casharkan, waxaan ku falanqeyn doonaa noocyada kala duwan ee slots-ka iyo shaqooyinkooda.

1. Noocyada kala duwan ee slots-ka iyo shaqooyinkooda.

a) PCI Express (PCIe) Slots

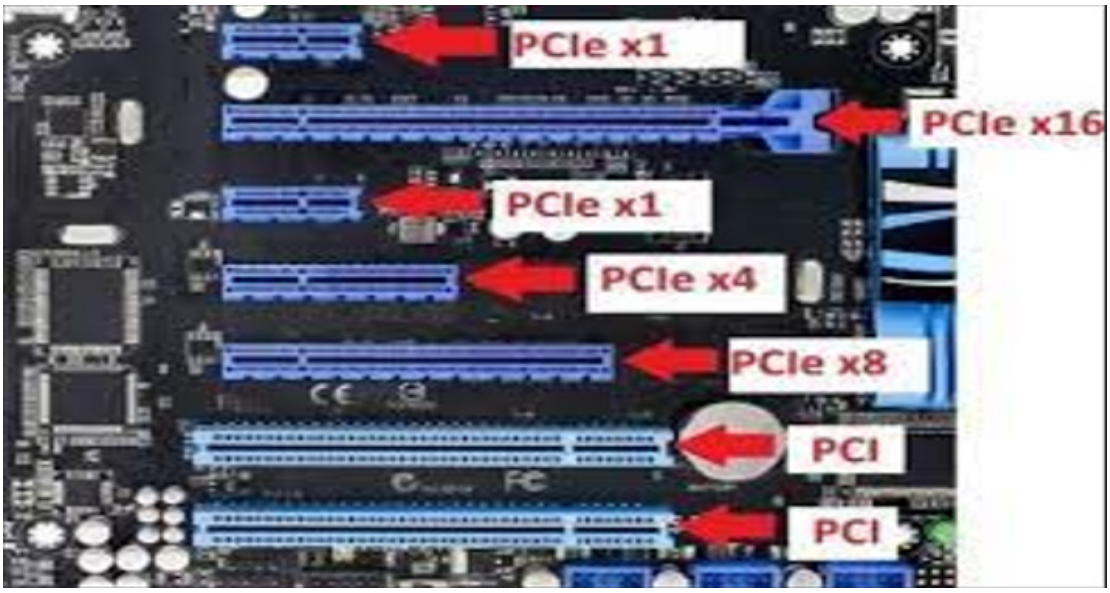
Waa **slots-ka ugu muhiimsan** ee lagu rakibo qalabka dheeraadka ah.

Waxaa jira noocyo kala duwan sida **PCIe x1, PCIe x4, PCIe x8, iyo PCIe x16**.

Waxaa loo isticmaalaa in lagu xiro:

Graphics Card (GPU) – si loo helo muuqaal tayo sare leh.

- **Sound Card** – si loo hagaajiyo tayada codka.
- **Network Card** – si loogu daro Wi-Fi ama Ethernet xawaare sare leh.

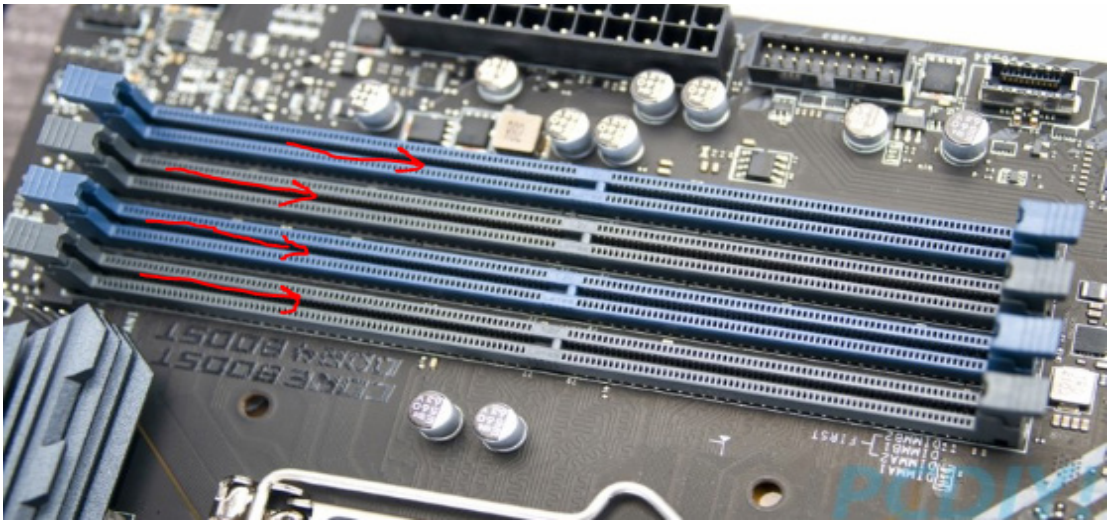


b) Gododka xasuusta

Waxaa lagu rakibaa RAM (Random Access Memory).

Waxay muhiim u tahay xawaaraha iyo waxqabadka kombiyuutarka.

Inta badan Looxada-yadu waxay leeyihiin 2, 4, ama 8 RAM slots.

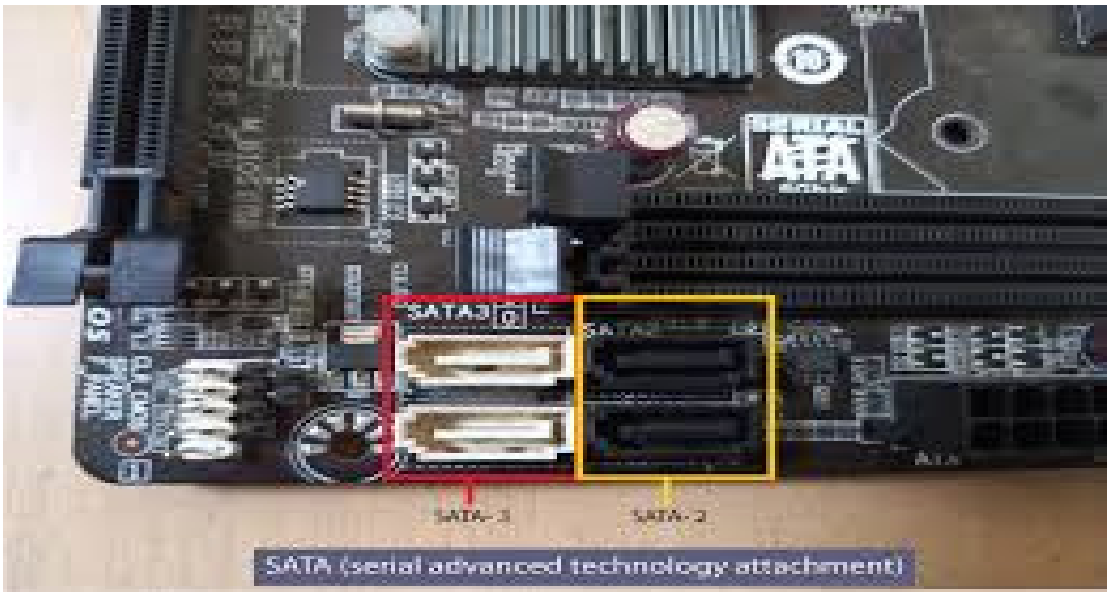


c) M.2 Slot

- **Waxaa loo isticmaalaa in lagu rakibo SSD (Solid State Drive).**
- **Waa xalka kaydinta xogta ee ugu dhakhsaha badan.**
- **Noocyada ugu caansan waa NVMe SSD iyo SATA SSD**.

d) SATA Slots

- Waxaa loo isticmaalaa in lagu xiro **hard drives (HDD), SSD-yada caadiga ah, iyo darawalada DVD/CD**.
- Waxay ka caawiyaan kaydinta xogta badan.

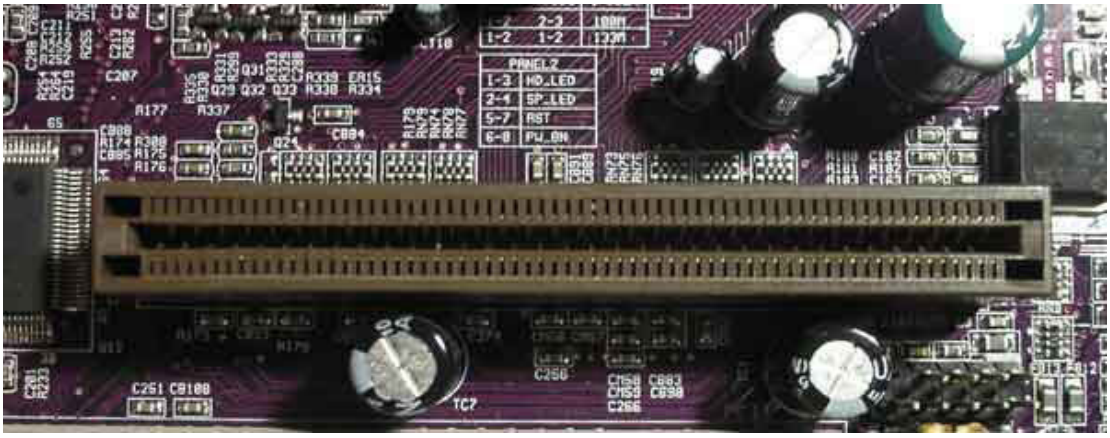


e) Legacy Slots (AGP, PCI, iyo ISA)

- **AGP (Accelerated Graphics Port) (1997~ – 2004)**

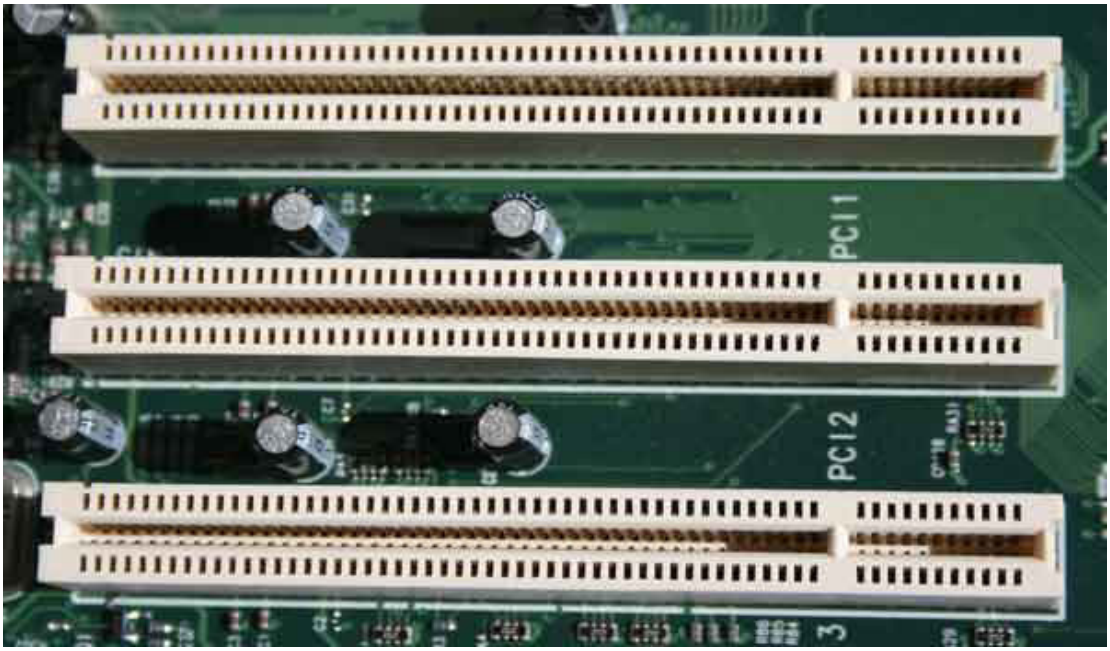
Asal ahaan waxa uu soo baxay 1997. AGP waxaa si gaar ah loogu talagalay kaararka garaafyada, naqshadeeduna waxay ku saleysan tahay PCI slot-ks.

AGP waxay u ogolaataa kaadhka garaafyada (Graphics Card) inuu si toos ah ula xidhiidho CPU. Si la mid ah PCI-E, AGP waxa ay taageertaa xawaarooyin badan:- 1X, 2X, 4X ama 8X. Waxa kale oo ay lahayd noocyo badan, laga bilaabo AGP 1.0, iyo ilaa AGP 3.5. Wwaxaa loo isticmaali jiray graphic cards, laakiin hadda waa la joojiyay.

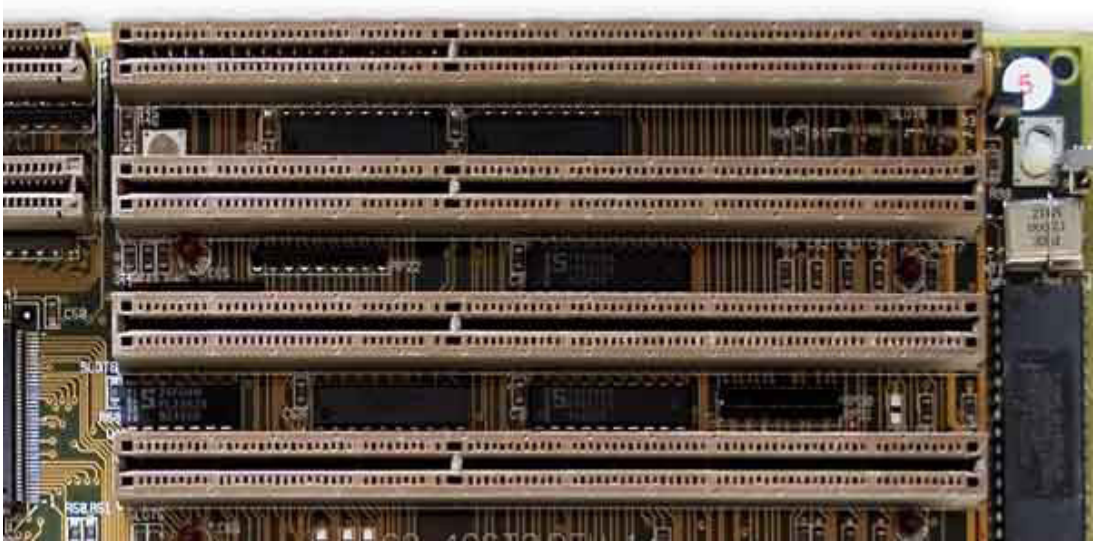


- **PCI** (Peripheral Component Interconnect) **(1992-2004~)**

Waxaa la soo saaray 1992. PCI waxay u taagan tahay "Peripheral Component Interconnect". Ka hor inta aan lagu beddelin AGP sanado badan ka dib, waxay ahaan jirtay slot ka caadiga ah ee lagu daro kaarka sawirada (graphics card) ISA ka dib, ilaa baahida sii kordheysa ee bandwidth ay ka badatay tahay xadiga ay bixiso.



- **ISA (1981 – 1993~) (Industry Standard Architecture)** – waa nooc aad u duqoobay oo hore loogu isticmaali jiray Looxada-yadii hore. Waa nooca ugu da'da weyn & ugu gaabis ah ee aan kaga hadlayno halkan. Waxay ku shaqaynaysay bandhwidh ilaa 8 MB/S. Wuxuu ku imaan jiray noocyada 8-bit & 16-bits ah. Waxaa jiray isku day lagu doonayay in lagu soo saaro nooca 32-bits, laakiin waa lagu guuldareystay.



2. Muhiimadda Slots-ka Looxada

- Waxay u suuragelinayaan kombiyuutarka inuu helo qalab dheeraad ah si loo hagaajiyo waxqabadkiisa.
- Waxay fududeynayaan casriyeynta (upgrading) kombiyuutarka.
- Waxay suurtagelinayaan isticmaalka qalabka muhiimka ah sida graphics cards iyo network adapters.

Waxqabadka 1aad:

Sawir-ka-falanqaynta Slots-ka Looxada-ka

Ujeeddo: Ardaydu waxay baranayaan noocyada kala duwan ee slots-ka ku yaal Looxada-ka iyo shaqooyinka ay qabtaan.

Hawlgalka:

1. Ardayda waxaa la siinayaa sawiro kala duwan oo Looxada ah oo muujinaya slots-yada sida: RAM slots, PCI, PCI Express, AGP, iyo M.2.
2. Ardaydu waxay magacaabayaan slot kasta, waxayna sharxayaan shaqadiisa iyadoo la barbar dhigayo qalabka lagu xiro.
3. Arday kasta wuxuu dooranayaa hal slot oo uu si qoto dheer uga sheekeynayo, wuxuuna si kooban ugu sharxayaa fasalka hortiisa.

Waxqabadka 2aad:

Isbarbardhig Kooxo (Group Comparison Activity)

Ujeeddo: Ardaydu waxay baranayaan farqiga u dhexeeya noocyada slots-ka iyadoo loo marayo isbarbardhig kooxeed.

Hawlgalka:

1. Ardayda waxaa loo kala saaraa kooxo yar yar.
2. Koox kasta waxay doorataa labo nooc oo slots ah (tusaale: PCI vs PCIe ama RAM slot vs M.2).

3. Waxay falanqeeynayaan farqiyada u dhexeeya labadaas slot, sida:
    - Xawaaraha xog-gudbinta
    - Qalabka lagu xiro
    - Wakhtiga isticmaalka (mid cusub/mid duugoobay)
4. Koox walba waxay natiijadooda ku soo bandhigaan qaab shax ah (comparison chart) ama afka.

Waxqabadka 3aad:

Mashruuc-yar: Isku-xidhka Qalabka Slot-ka ku xirmaya

Ujeeddo: Ardaydu waxay si toos ah u baranayaan qalabka lagu xiro slots-ka kala duwan.

Hawlgalka:

1. Koox walba waxa la siinayaa qalabyo kala duwan sida RAM, sound card, Wi-Fi card, ama M.2 SSD.
2. Waxay ku shaqaynayaan Looxada aan koronto ku xiranayn.
3. Waxay ku tijaabinayaan sida qalabkaas loogu xiro slots-ka saxda ah.
4. Kadib, waxay sharxayaan: magaca qalabka, magaca slot-ka uu galo, iyo sababta loo adeegsado.

Waxqabadka 4aad: Kedis degdeg ah (Quiz)

Ujeeddo: Lagu xoojinayo fahamka ardayda ee noocyada slots-ka iyo shaqadooda.

Hawlgalka:

1. Macallinku wuxuu weydiinayaa su'aalo degdeg ah oo ku saabsan:
    - Nooca slot-ka ay galayaan kaararka maqal/dhawaaqa.
    - Shaqada RAM slot-ka.

- Farqiga u dhexeeya PCI iyo PCIe.
- Waa maxay AGP iyo sababta uu duugoobay.

2. Ardaydu waxay si degdeg ah uga jawaabaan afka, gacanta u taagayaan ama buuxinayaan xaashi yar.

Gunaanad

Casharkan waxa aan ku soo barannay

Slots-ka Looxada-ka waa meelaha lagu rakibo qalab dheeraad ah si loo hagaajiyo awoodda kombiyuutarka. Noocyada ugu muhiimsan waxaa ka mid ah **PCIe, RAM slots, M.2 slots, iyo SATA connectors**. Fahamka shaqadooda wuxuu muhiim u yahay qof kasta oo doonaya inuu barto dayactirka, hagaajinta, iyo casriyeynta kombiyuutarka.

Layli

Su'aalo ka turjumaya Casharka 2aad

1. Waa maxay slot-ka Looxada-ka, maxaase lagu gartaa?
2. Sheeg laba (2) shaqo oo muhiim ah oo ay qabtaan slots-ka Looxada-ka.
3. Waa maxay farqiga u dhexeeya PCI iyo PCI Express (PCIe)?
4. Slotkee ayaa loo isticmaalaa in lagu xiro RAM-ka?
5. Sheeg ugu yaraan saddex (3) qalab oo lagu xiro slots-ka Looxada-ka.
6. Waa maxay M.2 slot, maxaase lagu xiraa?
7. Maxaa sabab u ah in AGP slot-ka uu noqday mid duugoobay oo aan hadda badanaa la isticmaalin?

Casharka 3aad Ciladaha hardware-ka ka dhasha iyo sida loo xaliyo

Ujeeddooyinka

Dhammaadka casharkaan bare-ardaydu waxa uu awood u yeelanayaan in ay:

1. **Aqoonsadaan** noocyada kala duwan ee Cilladaha hardware-ka.
2. **Sharaxaan** sababaha keena Cilladaha hardware-ka.
3. **Kala saaraan** Cilladaha caadiga ah iyo kuwa halista ah ee hardware-ka.
4. **Tilmaamaan** xalalka lagu xallin karo dhibaatooyinka hardware-ka.
5. **Fuliyaan** hababka aasaasiga ah ee tijaabinta iyo hagaajinta hardware-ka.

Hordhac

Hardware-ku waa qeybaha jirka ee kombiyuutarka sida Looxada, processor (CPU), RAM, hard drive, iyo qalabka kale ee lagu xiro kombiyuutarka. Mararka qaar, qalabkani wuxuu la kulmaa cilado sababi kara in kombiyuutarku uusan si sax ah u shaqeyn.

Cilladaha hardware-ka waxay noqon karaan kuwo fudud sida fiilo xiran ama kuwo halis ah sida processor-ka oo gubanaya. Casharkan, waxaan ku falanqeyn doonaa noocyada ugu badan ee Cilladaha hardware-ka iyo sida loo xallin karo.

1. Noocyada Cilladaha Hardware-ka iyo Sababaha Keena

a) Cilladaha La Xiriira dib bixiyaha kombiyuuterka

- **Astaamaha:** Kombiyuutarka oo aan shidmin, mararka qaar shidma kadibna damma.
- **Sababta:**
  - Koronto aan degganeyn ama daciif ah.
  - Power supply (PSU) oo cilladoobay.
  - Fiilooyinka korontada oo go'an ama xumaaday.

- **Xalka:**
  - Hubi in korontadu sax tahay.
  - Tijaabi power supply-ga adigoo isticmaalaya power tester ama ku xiro kombiyuutar kale.
  - Bedel fiilooyinka haddii ay waxyeeloobaan.

b) Cilladaha Maxkada Kombiyuutarka

- **Astaamaha:** Kombiyuutarka oo aad u kululaada, daahitaan (lag), ama damid kedis ah.
- **Sababta:**
  - Fan-ka CPU-ga oo aan shaqeynin ama si xun u shaqeynaya.
  - Dufan qaboojiye (thermal paste) oo yaraaday ama qallalay.
  - Kombiyuutarka oo aan lahayn hawo fiican ama ay wax ku gudban yihiin daloolada hawada marto (ventilation).
- **Xalka:**
  - Nadiifi fan-ka CPU-ga iyo heerkulka la socda.
  - Dib ugu mari dufanka qaboojiyaha (thermal paste).
  - Hubi in cooling system-ka kombiyuutarka sax u shaqeynayo.

- (Dib ugu mari dufanka qaboojiyaha (thermal paste)).

c) Cilladaha Xasuusta (RAM Errors)

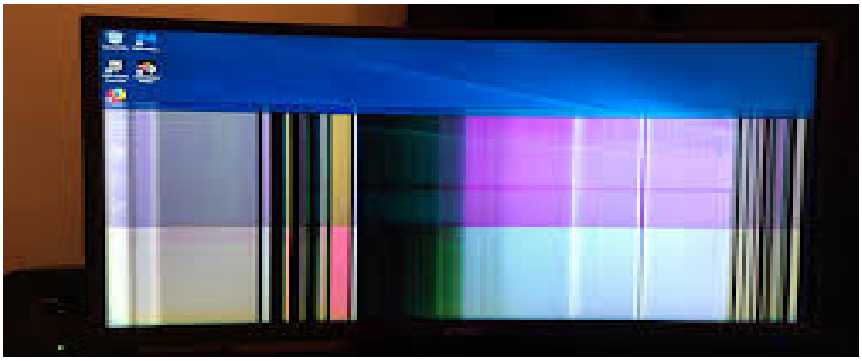
- **Astaamaha:** Blue screen of death (BSOD), barnaamijyo si lama filaan ah u xirma, kombiyuutarka oo dib isku shida (restart).
- **Sababta:**
  - RAM-ka oo xumaaday ama aan si fiican ugu xirnayn Looxada-ka.
  - Noocyo RAM oo is diidaya oo ku wada jira hal kombiyuutar.
- **Xalka:**
  - Dib u saar oo dib ugu xiro RAM-ka.
  - Isticmaal Memory Diagnostic Tool si loo eego Cilladaha.
  - Haddii uu cilladoobay, bedel RAM-ka.

d) Cilladaha Hard Drive-ka (Storage Errors)

- **Astaamaha:** Kombiyuutarka oo aad u gaabiya, faylasha oo luma, iyo cod aan caadi ahayn oo ka baxaya hard drive-ka.
- **Sababta:**
  - Hard drive-ka oo xumaaday ama ay jiraan qaybo ka xumaaday (bad sectors).
  - Cable-ka SATA/IDE oo go'ay ama waxyeeloobay.
- **Xalka:**
  - Isticmaal CHKDSK si aad u hubiso Cilladaha hard drive-ka.
  - Haddii SSD ama HDD uu dhaawac gaadhay, ka samee xog keydin (backup) meel kale kadibna bedel.
  - Hubi in xarkaha hard drive ka sax u xiran yihiin.

e) Cilladaha Graphics Card-ka (Graphics Processing Unit (GPU Errors))

- **Astaamaha:** Shaashadda oo mugdi ah, muuqaalka oo xumaaday (glitches), ama ciyaaraha oo si xun u shaqeeya.



- **Sababta:**
  - Graphics card-ka oo aad u kululaaday.
  - Barnaamijka howl geliyaha (drivers) oo aan cusboonaysnayn (not updated).
  - GPU oo aan si fiican ugu xiran Looxada-ka.

(Graphics Processing Unit - GPU)

- **Xalka:**
  - Dib u saar GPU-ga oo si fiican ugu xiro slotka loogu tala galay.
  - Nadiifi fan-ka GPU-ga.
  - Cusbooneysii Barnaamijka howl geliyaha ee GPU-ga (Drivers update).

f) Cilladaha Looxada

- **Astaamaha:** Kombiyuutarka oo aan shidmin, calaamado khaldan oo ka soo baxaya BIOS, ama qalab badan oo aan shaqeynayn.
- **Sababta:**
  - Qaybo ka mid ah Looxada-ka oo xumaaday.
  - BIOS-ka oo khaldan ama aan la cusbooneysiin (not update).
- **Xalka:**
  - Dib u soo celi BIOS-ka adoo isticmaalaya CMOS Reset.
  - Hubi in fiilooyinka si sax ah ugu xiran yihiin Looxada-ka.
  - Haddii Looxada-ka xumaado, waxaa loo baahan karaa in la beddelo.

Sida Loo Ogaado Oo Loo Xalliyo Cilladaha Hardware-ka

1. **Hubi Calaamadaha Cillada** – eeg calaamadaha uu bixinayo kombiyuutarka si loo fahmo dhibaatada.
2. **Isticmaal Diagnostic Tools** – sida **Windows Memory Diagnostic, CHKDSK, iyo BIOS hardware tests**.
3. **Beddel Qeybaha Cilladoobay** – haddii qalab sidii loogu tala galay u shaqeynayn, isku day inaad bedesho.
4. **Nadiifi Qalabka** – boodh iyo kuleyl badan ayaa keeni kara cilladaha hardware.

5. **Hubi Barnaamijyada howl geliyaha (Drivers)** – cusbooneysii software-ka qalabka si uu si sax ah u shaqeeyo.

Waxqabadka 1aad:

Aqoonsi Cilad - Sheekooyin Kooban (Case Study Activity)

Ujeeddo: Ardaydu waxay baranayaan sida loo aqoonsado ciladaha kala duwan ee hardware-ka.

Hawlgalka:

1. Ardayda waxaa loo qeybiyaa dhowr sheeko oo gaagaaban oo ka hadlaya dhibaatooyin hardware ah (tusaale: kombuyuutarka ayaa shidmi waayay, sawir ma muuqdo, cod ma soo baxayo).
2. Ardayda waxay falanqeeyaan sheekada, waxayna go'aaminayaan:
   - Qalabka ay dhibaatadu saameysay (hardware-ka).
   - Nooca ciladda.
   - Xalka suurtagalka ah.
3. Arday walba ama koox walba waxay soo bandhigayaan jawaabahooda.

Waxqabadka 2aad:

Tijaabinta Cilado Faneed (Simulated Troubleshooting)

Ujeeddo: Ardaydu waxay si ficil ah u baranayaan tijaabinta iyo xalinta ciladaha hardware-ka.

Hawlgalka:

1. Macallinku wuxuu diyaariyaa kombuyuutarro ay ku jiraan cilado fudud oo la sameeyay (ama la sheegayo cilado si faneed ah).
2. Ardaydu waxay isticmaalayaan hab-raac ay ku aqoonsadaan ciladda, waxayna soo jeedinayaan xalal.

3. Waxaa la qiimeeyaa kartidooda aqoonsi, nidaamka ay u mareen, iyo xalinta dhibaatada.

Waxqabadka 3aad:

Koox-koox u Kala Saari Ciladaha (Categorization Game)

Ujeeddo: Ardaydu waxay baranayaan kala-duwanaanshaha ciladaha hardware-ka.

Hawlgalka:

1. Macallinku wuxuu qoraa liis cilado kala duwan ah (tusaale: monitor ma shidmo, RAM cilladaysan, keyboard aan shaqaynayn, PC wuu kululaanayaa).
2. Koox walba waxay u kala saarayaan ciladahaas qeybaha: *Input devices, Output devices, Memory, Storage, Power supply* iwm.
3. Waxay sidoo kale raacinayaan xal suurtagal ah oo ciladahaas la xiriira.

Waxqabadka 4aad: Kedis Degdeg ah

Ujeeddo: Lagu xaqiijinayo fahamka guud ee ardayda ee ciladaha hardware-ka.

Hawlgalka:

1. Macallinku wuxuu weydiinayaa su'aalo degdeg ah sida:
   - Haddii kombuyuutarka aanu shidmeynin, maxaa sababi kara?
   - Maxaa cilad ah oo ka iman kara RAM xumaaday?
   - Sidee lagu ogaadaa in power supply-ga cilad leeyahay?
2. Ardaydu waxay si dhaqso leh u bixiyaan jawaabaha (afka ama qoraal yar).
3. Waxaa la siinayaa dhibco/ama abaalmarin kooxdii ugu jawaab wanaagsan.

Gunaanad

Casharkan waxa aan ku soo barannay

Cilladaha hardware-ka waa dhibaatooyin ka dhaca qeybaha kombiyuutarka, waxaana ay saameyn ku yeelan karaan shaqadiisa. Khaladaadka caadiga ah waxaa ka mid ah **kuleylka CPU-ga, xasuusta (RAM) khaldan, hard drive xumaaday, iyo Looxada oo cilad yeesha**. Xalka ugu wanaagsan waa in la aqoonsado calaamadaha, la isticmaalo qalab lagu baaro dhibaatooyinka, lagana shaqeeyo dayactirka saxda ah. Fahamka iyo xallinta cilladaha hardware-ka waa xirfad muhiim u ah qof kasta oo isticmaala ama hagaajiya kombiyuutarrada.

Layli

Su'aalo ka turjumaya Casharka 3aad

1. Waa maxay cilad (hardware fault)? Maxaase lagu gartaa in cilad ka jirto qalabka?
2. Sheeg saddex (3) calaamadood oo muujin kara in cilad ka jirto qeybta awoodda (power supply) ee kombuyuutarka.
3. Haddii shaashadda kombuyuutarka aysan soo bandhigayn wax muuqaal ah, maxaa keeni kara ciladaas?
4. Maxaa sababi kara in kombuyuutarka uu si kedis ah iskiis u damo (shido/damo)?
5. Sheeg laba (2) qalab oo haddii ay cilad ka dhacdo ay sababi karaan kombuyuutarka inuusan soo kicin (boot failure).
6. Waa maxay RAM ciladeysan, maxaase calaamado lagu garto in RAM-ka xumaaday?
7. Sidee loo xallin karaa cilad ka dhalata xadhig ama cable aan si fiican loogu xirin Looxada-ka?

Casharka 4aad Shaashadaha kal duwan Iyo hagaajintooda

Ujeeddooyinka

Dhammaadka casharkaan bare-ardaydu waxa uu awood u yeelanayaan in ay:

1. **Aqoonsadaan** noocyada kala duwan ee shaashadaha kombiyuutarrada iyo aaladaha kale.
2. **Sharaxaan** farqiga u dhexeeya noocyada shaashadaha sida LCD, LED, OLED, iyo Plasma.
3. **Fahmaan** waxa laga wado resolution iyo sida ay u saameyso tayada muuqaalka.
4. **Tilmaamaan** sida pixels, refresh rate, iyo aspect ratio ay ugu wada shaqeeyaan soo bandhigista muuqaalka.
5. **Kala saaraan** shaashadaha ugu habboon ee hawlaha kala duwan sida ciyaaraha (gaming), naqshadeynta (designing), iyo daawashada filimada.

Hordhac

Shaashadaha (displays) waa qayb muhiim u ah kombiyuutarrada, taleefoonada, iyo aalado badan oo elektaroonig ah. Tayada shaashadu waxay saameyn ku leedahay muuqaalka, midabada, iyo waayo-aragnimada isticmaalaha.

Casharkan, waxaan falanqeyn doonaa noocyada kala duwan ee shaashadaha, waxa laga wado **resolution**, iyo sida ay shaqeeyaan qeybaha kala duwan ee shaashaduhu.

1. Noocyada Kala Duwan ee Shaashadaha

a) LCD (Liquid Crystal Display)

- Waa shaashad isticmaasha dareerayaal isku urursan oo koronto ku shaqeeya.
- Waxaa loo isticmaalaa kombiyuutarrada, taleefoonada casriga ah, iyo TV-yada.

- Waxay u baahan tahay iftiin dambeed (backlight) si ay u shaqeyso.

b) LED (Light Emitting Diode Display)

- **Waa nooc casri ah oo ka mid ah LCD, laakiin wuxuu adeegsadaa LED-yada, nalal yar yar oo badan, si uu u bixiyo iftiinka.**
- **Waxay bixinaysaa midabo wanaagsan iyo muuqaal tayo sare leh.**
- **Wax**ay keydisaa tamarta marka la barbar dhigo LCD caadiga ah.

c) OLED (Organic Light Emitting Diode)

- **Qayb kasta oo shaashadda ka mid ah (pixel) waxay iftiimaysaa si gaar ah iyadoon u baahnayn iftiin dambeed back light.**
- **Waxay bixisaa midabyo qoto dheer, gaar ahaan madow saafi ah.**
- **Waxaa loo isticmaalaa taleefoonada casriga ah, TV-yada, iyo shaashadaha ciyaaraha (gaming-ka) sare.**

d) Plasma Display

- Waxay isticmaashaa gaas si ay u abuurto iftiin, taasoo ka dhigaysa shaashad tayo sare leh.
- Waxay lahayd muuqaal wanaagsan, laakiin hadda si tartiib ah ayay u dhamaaneysaa maadaama LED iyo OLED ay ka fiican yihiin.

2. Waa Maxay Resolution, Pixels, Iyo Refresh Rate?

a) Resolution

- Resolution wuxuu tilmaamayaa tirada **pixels** ee shaashaddu leedahay.
- Waxaa lagu cabiraa qaab **Width × Height (Ballac × Dherer)**.
- Noocyada ugu caansan:
  - 720p (HD) – 1280 × 720 pixels
  - 1080p (Full HD) – 1920 × 1080 pixels
  - 1440p (2K) – 2560 × 1440 pixels
  - 2160p (4K) – 3840 × 2160 pixels
  - 4320p (8K) – 7680 × 43**20 pixels**

b) Pixels

- Pixel waa dhibic yar oo ka mid ah sawirka la arko shaashadda.
- Shaashad leh pixels badan waxay bixisaa muuqaal fiiqan oo cad.

c) Refresh Rate

- Waxaa lagu cabiraa Hertz (Hz) waana tirada jeer ee shaashaddu dib u cusboonaysiinayso muuqaalka halkii ilbiriqsi.
- Noocyada caadiga ah ee refresh rate:
  - 60Hz (Caadi ah) – loogu talagalay isticmaalka maalinlaha ah.
  - 120Hz – 144Hz (Gaming) – loogu talagalay ciyaaraha si muuqaalka u noqdo mid siman.
  - 240Hz – 360Hz (Gaming Sare) – loogu talagalay ciyaartoyda xirfadda sare leh.

3. Aspect Ratio Iyo Saameynta Ay Ku Leedahay Shaashadda

- Aspect Ratio waa xiriirka u dhexeeya ballaca iyo dhererka shaashadda.
- Noocyada caadiga ah:
  - **4:3** – Shaashadaha hore ee kombiyuutarrada iyo TV-yada.
  - **16**:9 – Shaashadaha casriga ah ee TV-yada iyo laptops-ka.
  - **21:9 (Ultra-Wide)** – loogu talagalay gaming iyo naqshadeynta.

4. Sida Shaashadaha U Shaqeeyaan

- Shaashaduhu waxay soo bandhigaan muuqaal iyagoo isticmaalaya pixels iyo iftiin gaar ah.
- LCD iyo LED waxay isticmaalaan backlight halka OLED uu mid kasta pixel gooni u iftiimiyo.
- Resolution, refresh rate, iyo aspect ratio waxay go'aamiyaan tayada muuqaalka.

6. Noocyada Shaashadaha Ugu Habboon Hawlaha Kala Duwan

Hawsha	Shaashadda Ugu Habboon
Isticmaalka Maalinlaha ah	1080p LED 60Hz
Gaming	1440p / 4K, 120Hz+ OLED ama IPS
Naqshadeynta	4K IPS oo leh midab sax ah
Daawashada Filimada	4K OLED ama LED oo leh HDR

Isbarbardhigga iyo Farqiga u Dhaxeeya LCD, LED, OLED, iyo Plasma Monitors

Shaashadaha casriga ah waxay u kala baxaan noocyo badan, laakiin kuwa ugu caansan waa **LCD, LED, OLED, iyo Plasma**. Inkasta oo dhammaantood loo adeegsado soo bandhigista muuqaalka, haddana waxay leeyihiin farqi weyn oo dhinacyada **tayada sawirka, isticmaalka tamarta, iyo habka ay u shaqeeyaan**.

Hoos waxaan ku eegi doonnaa **isbarbardhigga (similarities) iyo farqiga (differences)** ee u dhexeeya noocyadan shaashadaha.

a) Isbarbardhigga (Waxyaabaha ay Wadaagaan)

Qodobka la barbardhigayo	LCD	LED	OLED	Plasma
Ujeedada loo isticmaalo	Telefishin, kombiyuutarro, taleefanno	Telefishin, kombiyuutarro, taleefanno	Taleefanno casri ah, TV-yada premium	TV-yadii hore, shaashado waaweyn
Tayada muuqaalka	Wanaagsan, laakiin mugdi ma bixin karo	Wanaagsan, midabyo sax ah	Aad u sarreeya, midabyo qoto dheer	Wanaagsan, laakiin dhalaal yari
Xagasha daawashada ((Viewing angle	Xadidan	Ka fiican LCD	Aad u sarreeya	Wanaagsan
Tamarta ay isticmaalaan	Dhexdhexaad	Keydisa tamarta marka la barbar dhigo LCD	Aad u yar, tamar badbaadiye	Tamar badan ayay isticmaashaa

b) Farqiga U Dhexeeya (Differences)

Qodobka	LCD (Liquid Crystal (Display	LED (Light Emit-(ting Diode Display	OLED (Organic Light Emitting (Diode	Plasma Display
Habka ay u shaqeyso	Isticmaasha dareere (liquid crystals) oo loo baahan yahay iftiin dambeed (back-.(light	Waa nooc LCD ah laakiin leh nalal LED ah oo bixiya .iftiin	Pixel kasta wuxuu leeyahay iftiin u gaar ah (self-emit-.(ting	Waxay isticmaashaa gaas plasma ah .oo soo saara iftiin
Tayada midabka	Wanaagsan, laakiin mugdiga ma ahan .mid dhab ah	Wanaagsan, laakiin wali wuxuu u baahan yahay iftiin .dambeed	Aad u sarreeya, gaar ahaan mad-.(owga (true black	Wanaagsan, laakiin xoogaa hooseeya marka la barbar .dhigo OLED

Qodobka	LCD (Liquid Crystal (Display	LED (Light Emit-(ting Diode Display	OLED (Organic Light Emitting (Diode	Plasma Display
Madowga (Black (Levels	Madow aan dhab ahayn, sababtoo ah .iftiin dambeedka	Ka fiican LCD, laakiin wali wuxuu .leeyahay backlight	Madow sax ah (true black), sababtoo ah pixels ayaa goonidood u .damaya	Wanaagsan, laakiin mugdi fiican ma .bixin karo
Dhibaata-da Screen Burn-in	Xoogaa yar, laakiin .ma badna	Mid la mid ah .LCD	Waxay yeelan kartaa burn-in haddii si xun loo .isticmaalo	Burn-in aad u .badan
Xawaaraha Refresh Rate	Caadi ahaan 60Hz-.144Hz	60Hz-240Hz (casri-.(yeysan	120Hz-240Hz oo .leh latency hoose	600Hz laakiin .latency sare leh
Xagasha daawashada	Xaddidan, muuqaalka wuu is beddelaya marka dhinac laga .eego	Wanaagsan, laakiin wali waxay ka .liidataa OLED	Aad u wanaagsan, muuqaalka ma xumaanayo xagal .kasta	Wanaagsan, laakiin xoogaa hoos u dhac ah wuu leeya-.hay
Adeegsiga tamarta	Dhexdhexaad	Ka tamar yar LCD	Tamarta ugu yar, waxtar badan	Isticmaala tamar .badan
Qiimaha	Raqiis	Dhexdhexaad	Aad u qaalisan	Si tartiib ah u baaba'aya, qiimo .jaban leh

c) Keebaa Ugu Fiican?

- ✓ **Haddii aad rabto shaashad dhalaal sare leh oo tayada midabkeedu sarreyso: OLED** ayaa ugu fiican, sababtoo ah midabkeeda saxda ah iyo mugdiga dhabta ah.
- ✓ **Haddii aad rabto shaashad tayo wanaagsan leh oo qiime jaban: LED** waa xalka ugu wanaagsan, sababtoo ah waa casriyeynta LCD oo leh tamar yar.
- ✓ **Haddii aad rabto shaashad gaming ama xawaare sare leh: LED (120Hz+) ama OLED** ayaa ugu habboon.
- ✓ **Haddii aad rabto shaashad waxtar badan oo lagu heli karo qiime**

hoose: LCD ayaa ah doorashada ugu wanaagsan.

- ✓ **Plasma** waa nooc si tartiib ah u dhammaanaya, maadaama OLED iyo LED ay ka fiican yihiin dhinac kasta.

Gunaanad ahaan, OLED waa nooca ugu fiican, laakiin waa qaali, halka LED uu yahay doorasho dhexe oo wanaagsan, LCD-na ay tahay mid raqiis ah oo shaqeynaysa.

Waxqabadka 1aad:

Isbarbardhigga Noocyada Shaashadaha (Display Comparison Activity)

Ujeeddo: Ardaydu waxay baranayaan farqiyada u dhexeeya noocyada shaashadaha kala duwan sida CRT, LCD, LED, iyo OLED.

Hawlgalka:

1. Ardayda waxaa loo qaybiyaa kooxo, koox walbana waxa la siinayaa hal nooc oo shaashad ah (ama sawirkeeda ah).
2. Waxay baaritaan yar ku sameeynayaan:
6. Sida uu u shaqeeyo.
7. Faa'iidooyinka iyo khasaaraha uu leeyahay.
8. Goobaha ama meelaha loogu isticmaalka badan yahay.
3. Waxay ku soo bandhigaan natiijadooda shax isbarbardhig ah (comparison table) oo ay fasalka hortiisa ku sharxayaan.

Waxqabadka 2aad:

Tijaabo Resolutions (Practical Screen Resolution Demo)

Ujeeddo: Ardaydu waxay fahmayaan sida resolution-ku u saameeyo tayada muuqaalka shaashadda.

Hawlgalka:

1. Macallinku wuxuu tusayaa kombuyuutar leh shaashad la beddeli karo resolution-keeda.
2. Waxaa lagu tijaabinayaa resolutions kala duwan sida 800×600, 1024×768, 1920×1080.
3. Ardaydu waxay arkaan sida sawirka/muuqaalka isugu beddelayo (waxay qoraal ahaan u muujiyaan: tayada, fidsanaanta, iyo caddeynta).
4. Kadib waxay qorayaan gunaanad ku saabsan resolution-ka ugu fiican ee shaashadda lagu isticmaalo.

Waxqabadka 3aad:

Magac-iyo-Muujin (Label the Diagram)

Ujeeddo: Ardaydu waxay aqoonsanayaan qeybaha kala duwan ee shaashadda.

Hawlgalka:

1. Ardayda waxaa la siiyaa sawir aan lahayn magacyo oo ah shaashad LCD ah (ama mid kale).
2. Waxay magac u yeelayaan qeybaha sida: Power button, Display panel, Ports (HDMI/VGA), Contrast & Brightness controls.
3. Waxaa lagu qiimeynayaa sax ahaanshaha magacaabista iyo fahamka shaqada qeybaha.

9. Waxqabadka 4aad: Dood Kooxeed: "Shaashadda ugu fiican"

10. Ujeeddo: Ardaydu waxay ku baranayaan kartida ay noocyada shaashadaha u leeyihiin hawlo kala duwan.

Hawlgalka:

1. Koox walba waxay difaacaysaa hal nooc oo shaashad ah (tusaale: LED, OLED, ama LCD).

2. Waxay sheegayaan sababta uu noocaasi ugu habboon yahay:

   - Daawashada filimada
   - Ciyaaraha (Gaming)
   - Xafiis shaqo
   - Naqshadeyn
   - Kooxaha waxay is weydiinayaan su'aalo, dooduna waxay xoojineysaa fahamka ardayda.

Gunaanad

Casharkan waxa aan ku soo barannay

Shaashaduhu waa qayb muhiim ah oo ka mid ah aaladaha casriga ah. Noocyada shaashadaha waxaa ka mid ah **LCD, LED, OLED, iyo Plasma**, halka resolution-ku uu tilmaamo caddeynta muuqaalka. Shaashad leh **pixels badan, refresh rate sare, iyo aspect ratio habboon** waxay bixisaa muuqaal tayo sare leh. Fahamka arrimahan wuxuu caawinayaa qof kasta oo raba inuu doorto shaashad ku habboon baahidiisa.

Su'aalo ka turjumaya Casharka 4aad

1. Sheeg ugu yaraan saddex (3) nooc oo shaashado ah oo casharka lagu soo qaaday.
2. Waa maxay faraqa u dhexeeya shaashadda LCD iyo shaashadda CRT?
3. Maxay tahay shaqada resolution-ka ee shaashadda?
4. Sidee buu resolution-ka u saameeyaa tayada sawirka ee shaashadda?
5. Waa maxay sababta shaashadaha LED loogu tixgeliyo kuwo tamarta badbaadiya?
6. Sheeg laba (2) faa'iido iyo laba (2) khasaare oo uu leeyahay shaashadda OLED.
7. Haddii shaashad la dejiyo resolution hooseeya marka loo eego awooddeeda, maxaa dhici kara?

Qiimeynta Cutubka "Hardware"

1. Maxaa loola jeedaa "hardware" marka laga hadlayo kombiyuutarka, tusaale ka bixi?
2. Sharax sida ay isugu xiran yihiin qaybaha kala duwan ee kombiyuutarka gudihiisa si uu si habsami leh ugu shaqeeyo.
3. Haddii aad heysato qalabka dibadda ah sida keyboard, speaker, iyo printer, sheeg godadka ku habboon ee aad uga xirayso motherboard-ka.
4. Ka waran haddii RAM-ka si khaldan loogu xiro motherboard-ka? Maxaa dhici kara, maxaase xal u noqon kara?
5. Sideed u aragtaa in godadka dibadda (external ports) ay ka muhiimsan yihiin kuwa gudaha (internal)? Dood kooban oo ku saleysan samee oo tusaalooyin ka bixi.
6. Eeg sawirka motherboard. Magacaw ugu yaraan 5 ka mid ah godadka ama slots-ka uu leeyahay iyo shaqadooda.
7. Maxaa sababi kara cilad ka timaadda power supply-ga? Sidee ayaad ku garan kartaa arrintaas?
8. Haddii aad dhiseyso kombiyuutar cusub oo loogu talagalay naqshadeyn (designing), shaashad noocee ah ayaad dooran lahayd? Sharax sababta aad ku dooratay.
9. Is barbar dhig shaashadaha LED iyo OLED dhinacyada: tayada muuqaalka, isticmaalka tamarta, iyo qiimaha. Midkee ayaad dooran lahayd adigoo isticmaalaya xogta casharka?

Cutubka 5aad: Barashada Windows

Hordhac

Kombiyuutarku si uu u shaqeeyo waxa uu u baahan yahay nidaam hawlgal (operating Systems).Shirkado badan ayaa sameeya nidaamyada hawlgalka kombiyuutarka. Shirkadahaas waxaa ka mid ah Microsoft, Apple, Google iyo kuwa kale oo badan. Nidaamka hawlgalka aan cutubkaanku baranayno waxaa sameeyey shirkadda Microsoft, waxa ayna ubixisay **"Windows",** waana midka ugu caansan dunida looguna adeegsibadan yahay.

Cutubkaan waxaa ku baranaynaa waxa uu yahay Windows; Sida loogu kala socdo Windows dhexdiisa; Xubnaha Oogada (Desktop) sidaSalladda (Recycle Bin), Buttonka Bilowga(Start Button), Galalka(Folders), Daaha Oogada (Desktop Background), Diilinta Hawlaha(Taskbar) iyo Taariikhda iyo Waqtiga.

Waxaa kale oo aan cutubkaan ku barandoonaa sida loo adeegsado galalka iyo faylasha oo ah qaybo muhiim ah oo ka mid ah isticmaalka kombiyuutarka. Marka aad fahamto sida galka iyo faylka u shaqeeyaan, waxaad isticmaali doonta marar badan.

Ujeeddooyinka Cutubka

Dhammaadka cutubkan bare-ardaydu waxa ay awood u yeelanayaan in ay:

1. Sheegi karaan shirkadaha sameeya nidaamka howlgalka
2. Qeexi karaan Windows
3. U kala Socon karaan Windows dhexdiisa
4. Ka sheegi karaan muuqaallada saaran Oogada (Desktop) sida:
   - Salladda (Recycle Bin)
   - Buttonka Bilowga(Start Button)

- Galalka(Folders)
- Daaha Oogada (Desktop Background)
- Diilinta Hawlaha(Taskbar)
- Taariikhda iyo Waqtiga.

5. Tusaale ka bixiyaan aasaaska adeegsiga faylasha.
6. Samayn karaan gal
7. Dhexgelin karaan fayl gal horey loo sameeyey
8. Tirtiri karaan fay ama gal.

Tusmada Cutubka

Cutubkaan waxa aan ku baran donnaa casharada soo socda:

Casharka 1aad: Asaasiyaadka "Windows"

Casharka 2aad: Gal iyo Fayl

Habka Waxbaridda

1. **Sharaxaad (Fasiraad Macallin)**
    - Macallinku wuxuu bilaabaa casharka isagoo bixinaya sharaxaad guud oo ku saabsan Windows 10: waa maxay, taariikhda nidaamka, iyo sifooyinka uu kaga duwan yahay nidaamyada kale.
2. **Dood ku saabsan noocyada kala duwan ee Barnaamij Hawleedka (Operating Systems)**
    - Ardayda waxay ka doodaan noocyada OS-yada kala duwan sida: Windows, Linux, macOS, iyo Android, iyagoo is barbar dhig ku sameynaya.
3. **Koox-koox Isku Weydiin & Dood Kooxeed**
    - Ardayda waxaa loo qaybiyaa kooxo si ay u falanqeeyaan su'aalo la xiriira Operating Systems, gaar ahaan Windows 10, kana doodaan faa'iidooyinka iyo caqabadaha.
4. **Akhrinta Buugaag Dheeraad ah**
    - Ardaydu waxay akhriyaan qoraallo kooban, maqaal ama buug si ay u fahmaan qoto dheer oo ku saabsan Windows 10 iyo nidaamyada kale ee hawlgalka.
5. **Ka Shaqayn Tusaalooyin ku Saabsan Sida Laysku Beddelo Bit iyo Byte**
    - Ardayda waxa la baraa sida loo beddelo bit-ka iyo byte-ka, iyagoo isticmaalaya tusaalooyin iyo xisaab fudud si ay u fahmaan unugyada xogta (data units).
6. **Tusin (Practical)**
    - Macallinku wuxuu tusayaa ficil ahaan sida Windows 10 loo isticmaalo:
        - Sida loo login gareeyo
        - Sida loo abuuro fayl cusub
        - Sida loo kaydiyo (save), loo raadsho (search), iyo loo maareeyo faylalka iyo galalka.
7. **Su'aalo iyo Jawaabo**
    - Casharka wuxuu ku dhammaanayaa su'aalo iyo jawaabo, si loo hubiyo fahamka ardayda, loona xoojiyo Waxbaridda.

Ujeeddooyinka Casharka

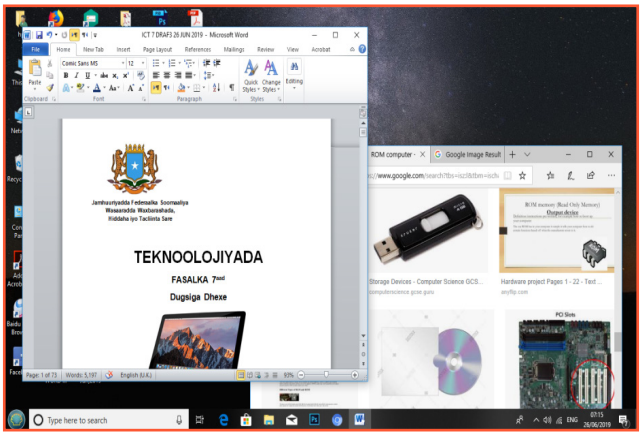
Dhammaadka casharkaan bare-ardaydu waxa ay awood u yeelanayaan in ay:

1. Qeexi karaan Windows
2. U kala Socon karaan Windows dhexdiisa
3. Kala sheegi karaan muuqaallada saaran Oogada (Desktop) sida:
   - Salladda (Recycle Bin)
   - Buttonka Bilowga(Start Button)
   - Galalka(Folders)
   - Daaha Oogada (Desktop Background)
   - Diilinta Hawlaha(Taskbar)
   - Taariikhda iyo Waqtiga.

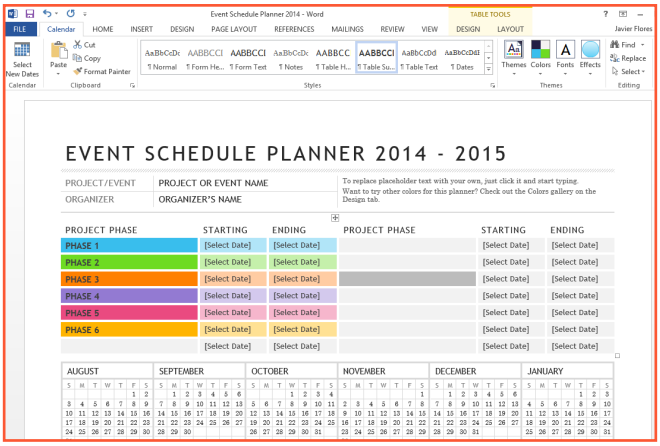
b. **Waa maxay "Windows"?**

Windows waa barnaamij ka shaqeysiiya kombiyuutarka, waxa aana soo saaray shirkadda Microsoft. Windows waa barnaamijyada ka shaqeysiiya kombiyuutarka kan ugu caansan dunida looguna adeegsi badan yahay. Windows waxa uu fududeyaa adeegsiga kombiyuutarka. Windows waxa uu suuragal ka dhigaa qabashada hawlaha kala duwanee loo adeegsado kombiyuutarka.

Tusaale ahaan waxa uu fududeeyaa in aad adeegsatid internetka, hubiso e-maillada ku jira sanduuqaada, dhageysatid cod duuban, kumadadaalatid cayaaro, habaysatid sawirradaada iwm.

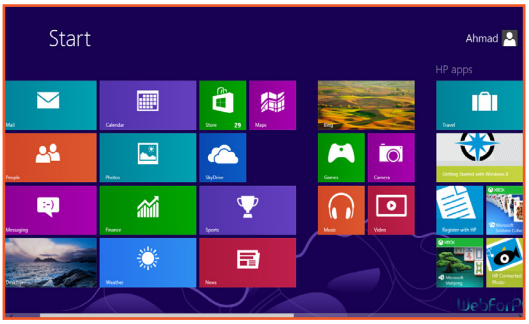


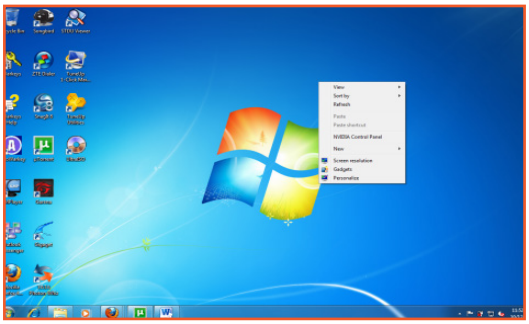
Windows waxa uu fududeeyaa ama suurto geliyaa in “Software Applications” shaqeeyaan oo sahlaan howlaha xafiisyada sida jadwalka shaqada, qoraallada iyo xisaabaadka.



Miscrosoft waxa ay soo saartay xirmadii 1aad ee windows bartamihii 1980 naadkii. Kadib waxaa isku xig xigay xirmooyin kale. Xirmadii ugu dambaysay Windows 12 waxa ay soo baxaday Oktoobar 2020, halka xirmada Windows 10 ay soo baxday 2015.

Xirmada window 8 waxa ay soo baxday 2012, halka Xirmadii Window 7 ay soo baxday 2009





Xirmadii Windows Vista waxa ay soo baxday 2007 halka Xirmadii Windows XP ay soo baxday 2001

Xirmooyinka Widows oo dhami waxa ay leeyihiin shaqo guud oo isku mid ah laakiin siday u kala danbeeyaan ayaa looga hagaajiyay cillado ama caqabado jiray, la casriyeeyay qaabkii ay u shaqaynayeen ama adeegyo gaar ah oo cusub lagu soo kordhiyay.

Waxqabadka 1aad:

Waxa aan saaxiibkey la wadaagaya laba barnaamij oo ka shaqeysiiyakombiyuutarka oo shirkado kale oo aan Microsof ahayn soo saareen.

Waxqabadka 2aad:

Waxa aan saaxiibkey la wadaagaya aasu'aashan:Maxaadhacayahaddiikombiyuutarka laga tiro Windows ama ay cillad ku timaaddo

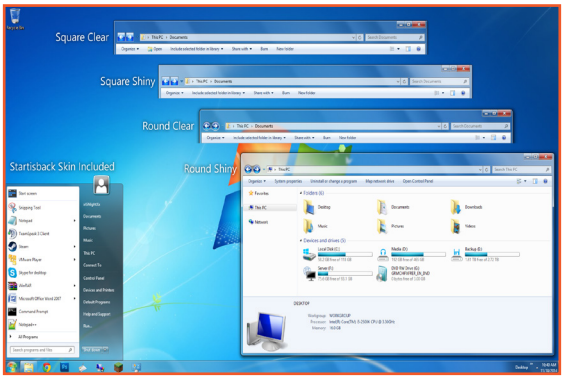
t. U kala Socodka Windows

Waxaa muhiim ah in aad barato aasaaska isticmaalkakombiyuutarka. Waxa aan

tallaabo tallaabo u sharxi doonnaa qaarka mid ah waxyaabaha aasaaska ah ee aad u baahan tahay sida looadeegsado disktobka, furidda iyo xirida daaqadaha, iyo damintakombiyuutarka.

Oogada (Desktop)

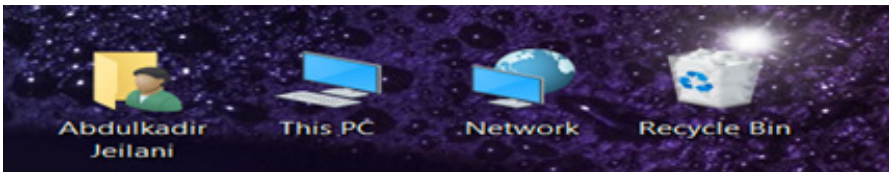
Marka uu kombiyuutarka so kaco, muuqaalka ugu horreeya ee aadarki doonta waa oogada. Oogada Miiska waa goob shaqooyinka lagamaamulo. Waxa aad ka arki kartaa, kana maamuli kartaa faylasha, galalka, barnaamijyada, internetka iwm.



Muuqaalada Desktop-ka saran waxaa ka mid ah

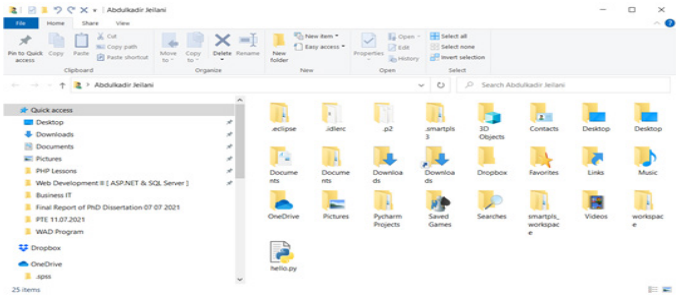
Astaamaha (icons) oogada miiska (desktop)

Astaamaha (icons) dul saran ogaada miiska (desktop) inta badan waxaa ka mid ah: gal shaqsiyeedka (personal folder), kombiyuutarka, shabakadda (network), salladda (Recycle bin). Adeegsadahu wuxuu abuuri karaa ama ku soo dari karaa galal (folders) kale.



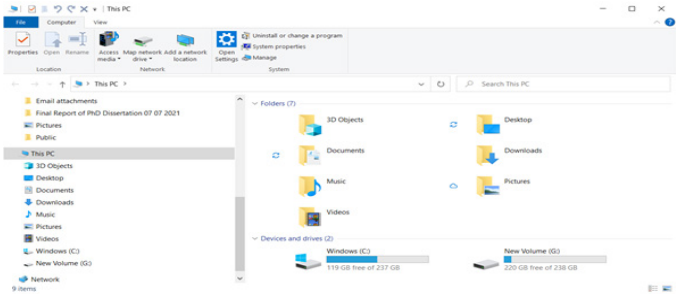
1. Gal shaqsiyeed(personal folder)

Waa halka ay ku jiraan galalka iyo faylaka waxaa lagu heli karaa faylalka u gaar ah koontada adeegsadaha waana mid u gaar ah adeegsado kasta oo kombiyuutarka ku jira. Waxaa kale laga helayaa dukumintiyada, sawirada, maqalka iyo cododka.



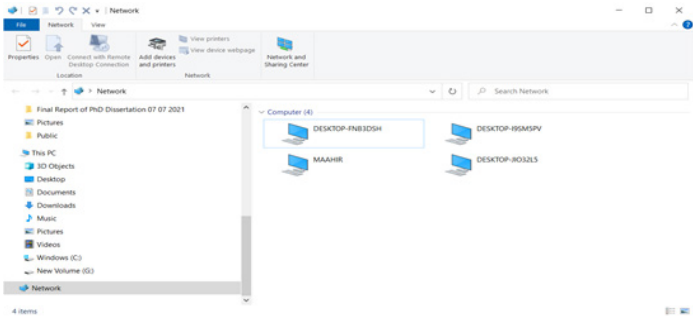
2. Kombiyuutarkaaga [This personal computer(PC)]

This PC(kombiyuutarkaaga): waa kombiyuutarkaaga oo dhan, oo leh dhammaan cajalada uu haysto sida cajalada C iyo cajalada D mararka qaarkooda waxaa soo galaya kuwa kale



3. Shabakada (Network)

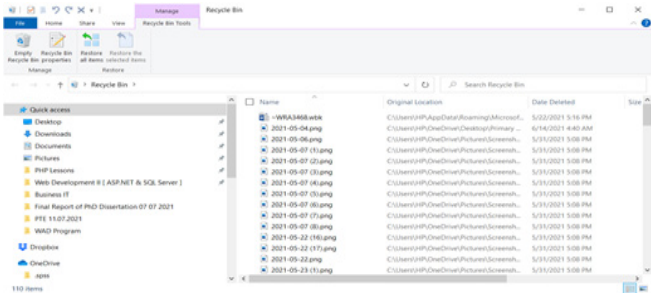
Waa halka aad ka heleeysid dhamman shabakada ku xiran kombiyuurkaaga waxaa sidoo kale ka maamuli kartaa shabakadaha sida in aan iska xirtid ama ogolaatid.



4. Salladda (Recycle Bin)

Salladdu waa meesha si ku meel gaar ah loogu keydiyo faylasha iyo galalka la tirtiro. Marka aad tirtirto fayl, waxa uu u wareegaa Salladda. Tani waxay kuu oggolaanaysaa in aad dib u Soo celiso feylashii ama galalkii aad tirtay haddii aad

ka noqotid. Si aad si joogto ah u tirtirto feylka, waxaad u baahan doontaa in aad faaruqiso salladda.



Waxqabadka 1aad

Waa maxay farqiqa u dhexeeyo Gal shaqsiyeed (personal folder) iyo Kombiyuutarkaaga [This personal computer (PC)]

Waxqabadka 2aad

Waa maxay farqiqa u dhexeeyo shabakada (Network)iyo Salladda (Recycle Bin).

j. Buttonka Bilowga (Start Button)

Buttonka bilawgu asal ahaan waxa uu saaran yahay desktop-ka dhinaciisahoose ee bidixda ah. Waa barta laga bilaabo dalabka barnaamijyada iyo faylasha Kombiyuutarka. Muuqaalkiisu waxa uu isla bedbedelay Xirmooyin Windows ee soo baxay. Waxaa sawirka ka muuqda buttonka iyo xirmada windows-ka

windows 95,98,NT 4.0. ME and 2003

windows XP

windows Vista and 7

windows 8.1 and 10

XirmooyinkaWindows 10, Windows 7, iyo xirmooyinka hore,botonka Bilawga waxa uu furayaa Dalabka(start menu). Xirmada Windows 8 waxa loo adeegsadaa in dib ugu soo celiso OogadaMiiska.

x. Daaha Oogada iyo Galalka

1. **Galalka**

Waa gal weyn oo la hoos gelin karo galal kale ama faylal.Waxa aad saari kartaa oogada miiska si aad si sahlan u adeegsatomarkii aad u baahatid. Mar ka aad laba jeer gujiso galka waxaa kuufurmaya galka, waxa aad arkaysaa faylasha ama galalka ku dhex jira galkaas.

2. Daaha Oogada (Desktop Background)

Daaha oogada waxa uu kuu saamaxayaa in aad saaratid masawirada aad rabtid Oogada Miiska. Waxa aad dooran kartaa mid ka mid ah masawirada ku jira Windowska ama waxa aad saari kartaa masawir kuu gaar ah.

kh. Diilinta Hawlaha(Taskbar) iyo Taariikhda

Diilinta Hawlaha waxa ay ka kooban tahay muuqaallada barnaamijyada, taariikhda waqtiga iwm. Marka aad furtid barnaamij ama fayl waxa uu ka soo muuqanayaa Diilinta Hawlaha. Waxa aad si sahlan u kala wareegi kartaa barnaamijyada kala duwan adiga oo ka xulanaaya Diilinta Hawlaha.

Taariikhda iyo Waqtiga (Date & Time)

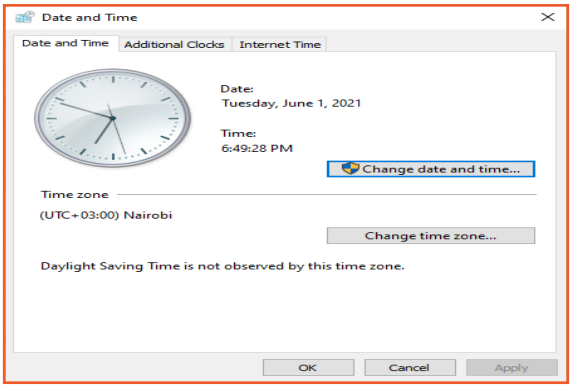
Dhinaca hoose midig ee Diilinta Hawlaha waxa aad ku arki kartaa taarikhda iyo waqtiga.Waayadan dambe, aaladaha badankood ee ku xiran internetka si toos ah ayey u saxaan **waqtiga qalabka,** si aynaan uga walwalin isbadalka waqtiga ama markii batariga gudaha kombiyuutarka uu howlgab noqdo taas oo wax badan fududaysay.

Badalidda Taariikhda iyo Waqtiga Kombiyuutarka

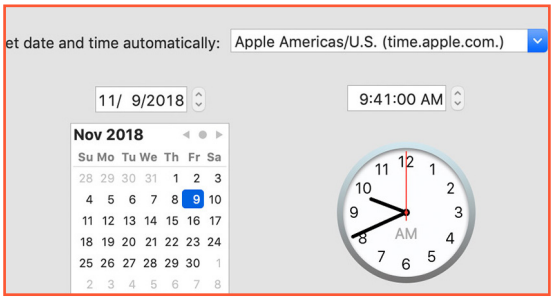
Si aad u bedesho taariikhda iyo waqtiga kumbiyuutarka Windows 10, waa inaad ku dhaqaaqdaa talaabooyinka soo socda kana muuqda sawirada is xig-xiga ee hoose

Windows 10 - Changing the System Date and Time

1. Ku dul qabo batoonka midig ee mouse-ka Waqtiga (Time) ee ka muuqata midigta hoose ee shaashadda. Ka dib, guji **Change date and time setting** ka muuqda shaashadda yar ee soo furmaysa
2. Daaqadda (**window)** furmaysaka dooro "**Change date and time**" ....



3. Ka dib daaqada kuu furanta geli/dooro taariikh iyo waqti sax ah, ka dibna guji batoonka **OK**



4. Taariikhda iyo saacadda kombiyuutarka waxa ay qaadan doonaan kuwa aad gelisay

Waxqabadka 3aad:

Baddal taariikhda iyo waqtiga kombiyuutar aad heli karto

Waxqabadka 4aad:

Cilmi Baaris

Maxay tahay saamaynta ay ku yeelan karto taariikh iyo waqti khaldan Barnaamijyada kala duwan ee ku jira kombiyuutarka?

Gunaanad

Casharkaan waxa aan ku soo barannay:

1. Kombiyuutarku si u u shaqeeyo waxa uu u baahan yahay nidaam hawlgal (operating systems).
2. Shirkado badan ayaa sameeya nidaamyada hawlgalka kombiyuutarka. Shirkadahaas waxaa ka mid ah Microsoft Apple, Google iyo kuwa kale oo badan.
3. Windows waa barnaamij ka shaqeysiiya kombiyuutarka, waxa aana soo saaray shirkadda Microsoft.
4. Oogada Miiska waa goob shaqooyinka laga maamulo. Waxa aad ka arki kartaa, kana maamuli kartaa faylasha, galalka, barnaamijyada, internetka iwm.
5. Salladdu waa meesha si ku meel gaar ah loogu keydiyo faylasha iyo galalka la tirtiro.
6. Bottonka Bilawgu waa barta laga bilaabo dalabka barnaamijyada iyo faylasha Kombiyuutarka.
7. Daaha Oogada waxa uu kuu saamaxayaa in aad saaratid masawirka aad rabtid Oogada Miiska.
8. Diilinta Hawlaha waxa ay ka kooban tahay muuqaallada barnaamijyada, taarikhda iyo waqtiga iwm.

Layli

1. Waa maxay windows?
2. Qor xirmooyinka windows iyo sanadihii ay soo baxeen.
3. Cilmi baaris: Raadi magaca hal nidaam hawlgal (operating system) aan ahayn windows.
4. Cilmi baaris: Sheeg nooca nidaam hawlgal(operating sytem) ee uu adeegsado mobaylkaaga ama kan saaxiibkaaga
5. Sheeg faa'iidooyinka
   - Oogada
   - Diillinta hawlaha
   - Salladda
   - Bottonka Bilawga
   - Daaha Oogada
6. Qor dhammaan waxa saaran oogada kombiyuutarkaaga.
7. Haddii nidaamka hawlgaka kombiyuutarka ay waxyeello gaarto, maxaa dhacaya? Sharax.

Su'aal: Waa maxay waxtarka galalka caadiga ee waraaqaha xafiisyada lagu rido?

Ujeeddooyinka Casharka

Dhammaadka casharkabare-ardaydu waxa ay awood u yeelanayaan in ay:

1. Tusaale ka bixiyaan aasaaska adeegsiga faylasha.
2. Abuuri karaan gal
3. Dhexgelin karaan fayl gal horey loo sameeyey
4. Tirtiri karaan fayl ama gal.

b. Waa maxay Fayl?

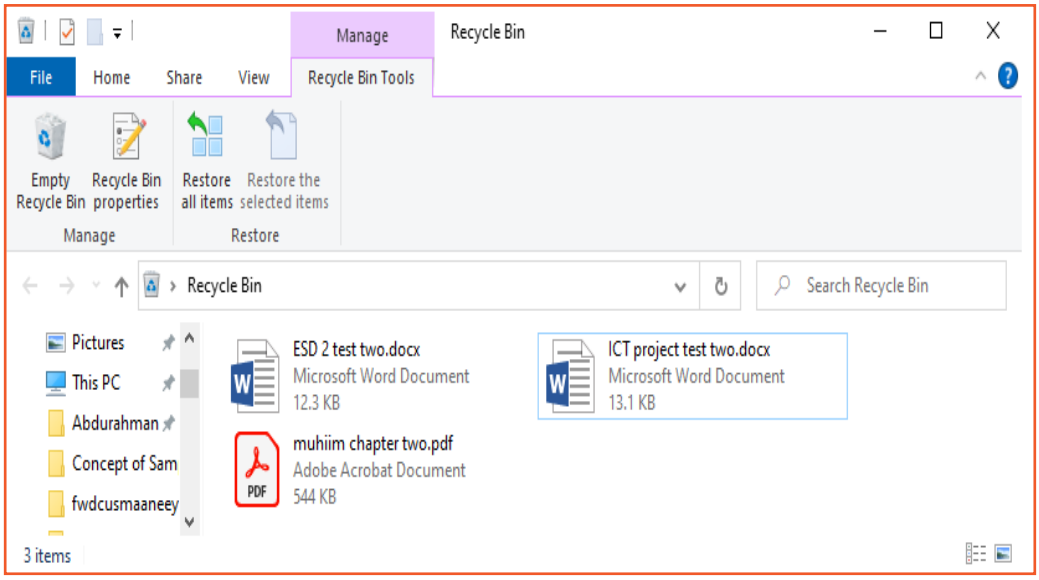
Fahamka sida loo adeegsado galalka iyo faylasha waa qayb muhiim ah oo ka mid ah isticmaalka kombiyuutarka. Marka aad fahamto sida galka iyo faylka u shaqeeyaan, waxaad isticmaali doonta marar badan.

Fayl waa meel lagu kaydiyo macluumaadka iyo xogta. Faylasha loo isticmaalo kombiyuutarada waxa ay la mid yihiin qaababka waraaqahaee loo isticmaalo faylasha xafiisyada iwm.

Waxaa jira noocyo kala duwan oo faylal ah oo aad isticmaali karto.Tusaale ahaan, dukumiintiyada, sawirrada dhijitaal ka ah, codadkadhijitaalka ah, iyo kuwo maqal iyo muuqaal ah, dhammaantood waanoocyo ka mid ah noocyada faylasha.

Marka aad isticmaaleyso barnaamijyada kala duwan, badanaa waxaaad daawaneysaa, abuureysaa, ama wax ka badaleysaa fayl.

Fayl waxaa badanaa u taagan **Astaan (icon)**muujinaysa nooca faylka**.** Sawirka hoose,waxa aad ku arki kartaa noocyo kala duwan oo faylal ah oo ku jira sallada (Recycle Bin) kuwaas oo kala ah 2 fayl oo Ms Word iyo hal Pdf fayl ah.



Waxqabadka 1aad:

Waxa aan qorayaa magacyada galalka ka muuqda sawirka kore

Waxqabadka 2aad:

Waxa aan koox-koox uga doodaynaa oo soo bandhigeynaa faraqa udhexeeya faylasha kombiyuutarka iyo faylasha warqadaha eexafiisyadda

Noocyada Faylasha iyo xarfaha gadaal ka raaca

Sidaan kor ku soo sheegnay noocyada faylasha waxaa ka mid kuwa loo isticmaalo dukumiintiyada, sawirrada dhijitaal ka ah, codadka dhijitaalka ah, iyo kuwo maqal iyo muuqaal ah.

Waxaa jira boqolaal nooc oo faylal oo kala duwan oo loo isticmaalo kombiyuutarada, Faylka magaca aad u bixiso waxaa gadaal ka raaca extension seddex ama afar xaraf ka kooban oo tilmaamaaya nooca file ka.

Hoos waxaa ku yaal liiska noocayada faylalka badanaa la iscticmaalo

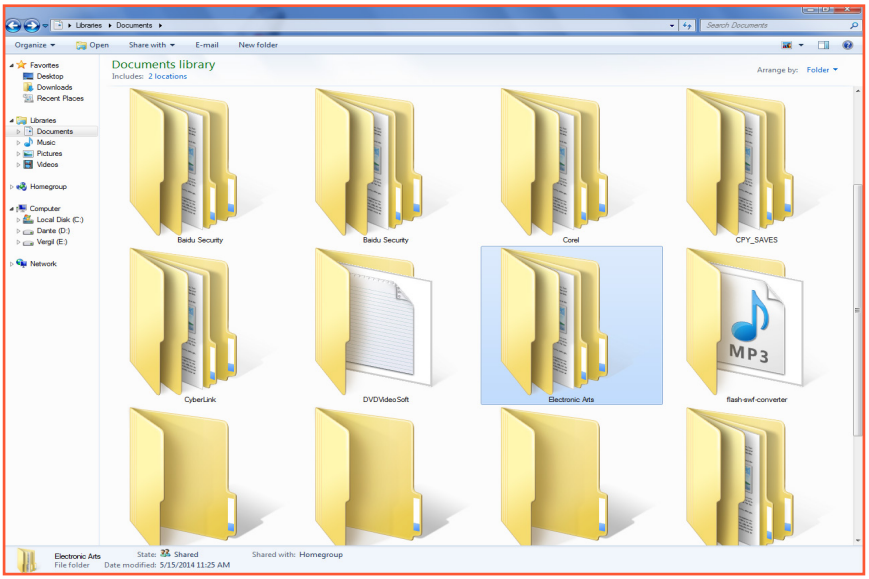
Xarfaha la raaciyo (File Extension)	Nooca Faylka (File Type)
AU.	Cod (Basic Audio)
AVI.	Maqal iyo muuqaal (Multimedia Audio/Video)
BMP.	Sawir (Windows BitMap)
DOC or .DOCX.	Microsoft Word for Windows/Word97
EXE.	Barnaamij (PC Application)
GIF.	Graphics Interchange Format
HTM or .HTML.	Bog internet (Web page source text)
JPG or JPEG.	Sawir (JPEG graphic)
MDB.	MS Access database
PDF.	Acrobat -Portable document format
PPT or .PPTX.	PowerPoint
PSD.	Adobe PhotoShop
TXT.	Notepad
WAV.	Cod (Windows sound)
XLS or .XLSX.	Excel spreadsheet
ZIP.	PC Zip Compressed Archive

t. Waa maxay Gal?

Gal waa meel lagu ururiyo faylasha dokumentiyada, galal kale iwm. Waa nidaamiye kuu fududeynaya in faylashaada aad kooxdii isku nooc ahba meel gaar ah la isugu ururiyo.

Windows waxa uu adeegsadaa galalka si uu kaaga caawiyo habeynta faylasha. Waxey ka dhigan tahay sida marka aad dukumintiyadaada gashaneysid gal warqad ka sameysan. Sawirka hoose, waxa aad ku arki kartaa qaar ka mid ah galal oogada (desktop) saaran.

Haddii uusan jiri lahayn Gal, dhammaan faylashaada, dokumentiyadaada iyo barnaamijyada hal meel ayey ku daadsanaan lahaayeen, waxa aana adkaan lahayd in aad si fudud ku hesho faylka aad u baahato.



Galku waxaa gudihiisa ku jiri kara hal ama wax ka badan oo faylal ama xataa galal kale. Waxaa dhici karta in aad aragto gal maran.

Waxqabadka 3aad:

Waxa aan qorayaa qiyaasti 10 magacyada galalka saaran oogada kombiyuutarka

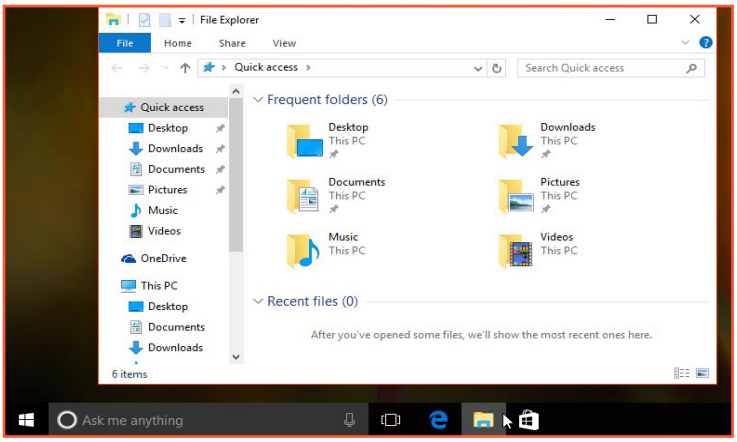
Waxqabadka 4aad:

Waxa aan koox-koox uga doodeynaa oo soo bandhigeynaa faraqa u dhexeeya GAL iyo FAYL.

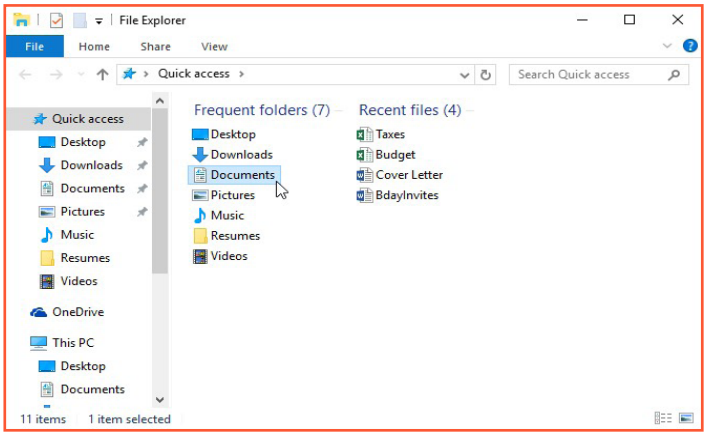
j. Fayl Meeleye (File Explorer)

Waxa aad arki kartaa oo aad habeyn kartaa galalka iyo faylasha adoo isticmaalaya barnaamijka windowska ee loo yaqaan 'File Explorer'.

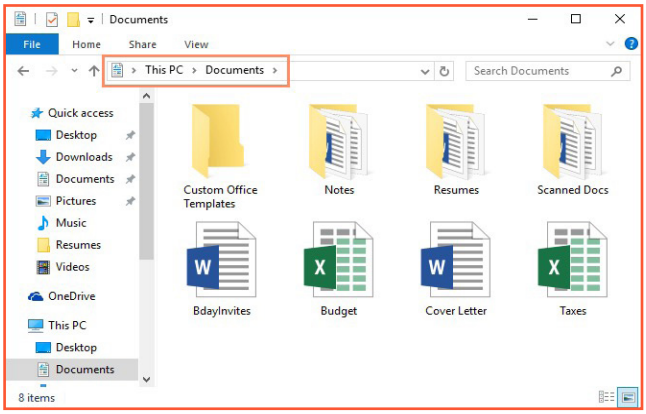
Si aad u furtid File Explorer, guji astaanta "**icon**" File Explorer ah ee ku taal diilinta hawlaha (taskbar), ama laba jeer guji gal saran desktopka. File Explorer oo cusub ayaa soo muuqan doona.



File Explorer dhexdiisa, laba jeer guji gal si aad u furto. Markaas kadib waad arki kartaa dhammaan faylasha lagu keydiyay galkaas.



Waxa aad sidoo kale arki kartaa meesha uu ku jiro galka oo ka muuqanaya dusha sare ee daaqada.



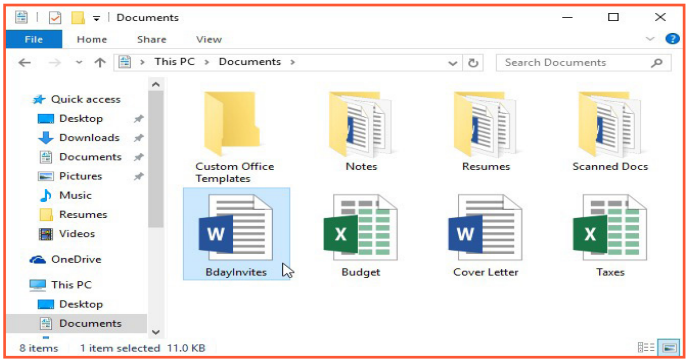
Waxqabadka 5aad:

Waxa aad habaysaa faylasha saran desktop-ka Kombiyuutarkaagaa, adiga oo isu raacinaayaa sida mowduucyada ay ka hadlaayaan isuguna gaynaaya gal leh magac laga fahmi karo mowduuca faylasha ku jira galka.

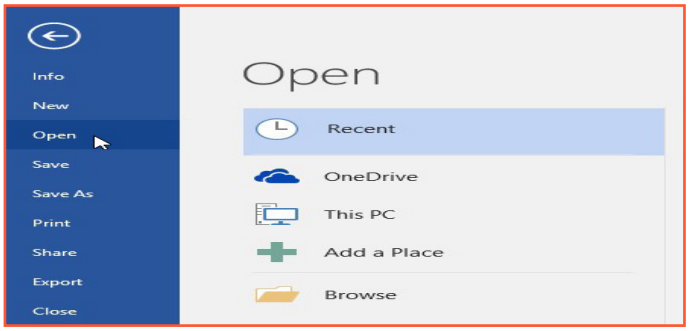
Si aad u furto fayl (Open a file):

Waxaa jira labo siyaabood oo loo furo faylka:

1. **Ka raadi** kombiyuutarkaga faylka aad dooneysid kadib laba jeer guji. Tani waxa ay kuu furi doontaa faylka barnaamijkiisa asalka ah sababtoo ah faylkasta waxa uu leeyahay barnaamij gaar ah oo soo saara, furo ama wax ka badalo. Tusaale ahaan, waxa aan furi doonaa dukumentiga Microsoft Word (BdayInvites.docx) kaas oo ku furmi doona barnaamijka Microsoft Word



2. Fur barnaamijka, ka dibna isticmaal barnaamijka si aad u furto feylka. Marka uu barnaamijka furmo, waxa aad tagi kartaa liiska faylka (File menu) ee dusha sare ee daaqada oo dooro Fur (Open).



Waxqabadka 6aad:

Waxa aad furtaa fayl adiga oo raacaaya 2da hab ee aan sare ku soo sheegnay kan 1aad

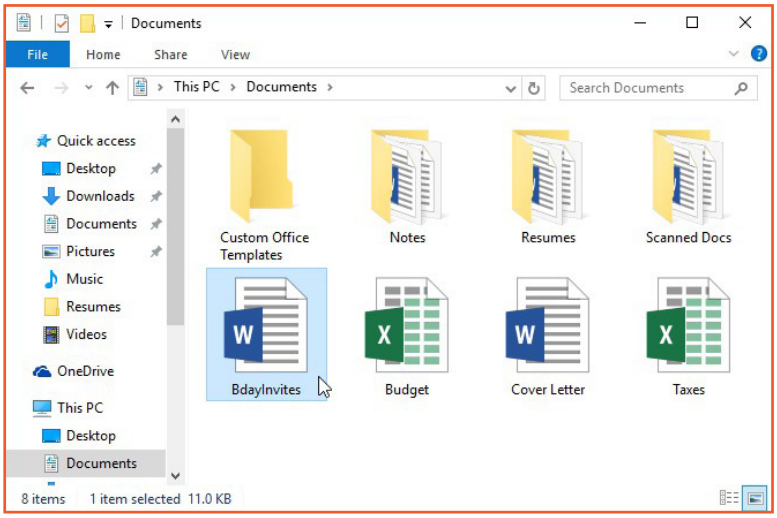
Dhaqaajinta iyo tirtiridda faylasha

Haddi aad muddo isticmaasho kombiyuutarkaada, waxaa aad abuuri doontaa faylal badan iyo galal. Nasiib wanaag, Windows waxa uu kuu saamaxayaa in aad u guuriso faylashaada galal kala duwan iyo in aad tirtirto faylasha aadan isticmaalin ama aadan u baahnayn.

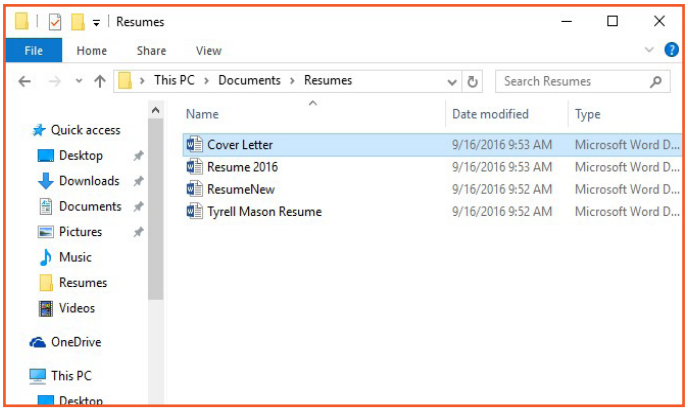
Si aad u rarto faylka (move a file):

Waa sahlan tahay in laga qaado fayl meel lana geeyo meel kale. Tusaale ahaan, fayl ayaa saaran oogada (desktop) waxaa u rartaa dokumtiyada meeshooda.

1. Guji oo u jiid faylka goobta aad rabtid inuu galo ama ka soo muuqdo.



2. Sii daa hagaha. Faylka waxa uu ka muuqan doonaa goobta cusub. Tusaalahan hoose, waxa aanu furnay galka si aan u aragno feylka oo yaallo goobta cusub.

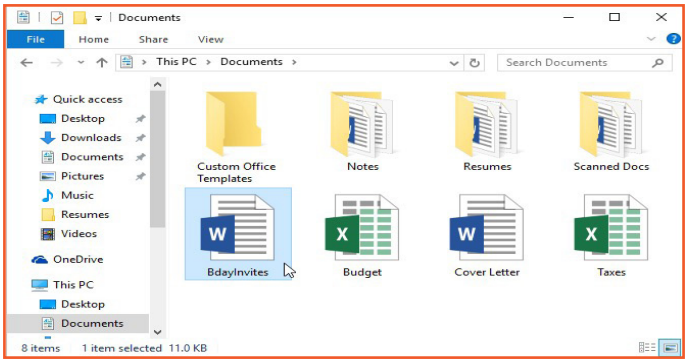


Sido kale waxa aad awooddaa in aad u adeegsatid isla farsamadan dhaqaajinta gal dhan.Ogsoonow in haddii la dhaqaajiyo galka ay raacayaan dhammaan faylasha ku jira galkaas gudahiisa.

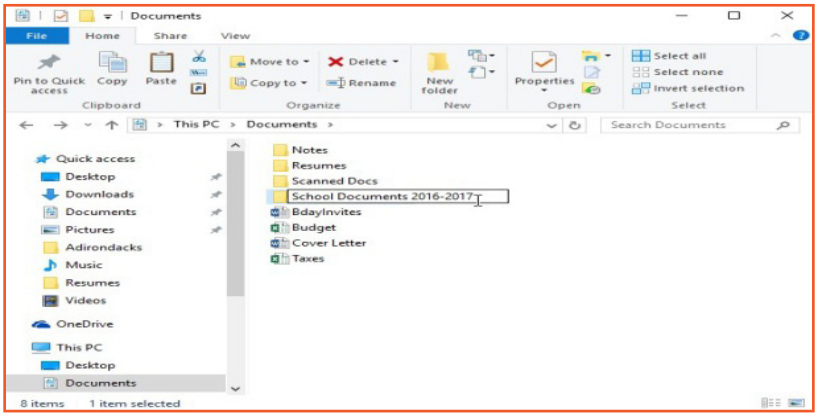
x. Abuuridda File Cusub (Create new file)

1. Guji File Explorer ee ka muuqda Diilinta Howlaha (Taskbar)

2. Gudaha barnaamijka File Explorer, raadi oo dooro batoonka gal cusub (New folder) ama guji dhinaca midig ee hagaha (mouse) ka dibna dooro gal cusub (New Folder).

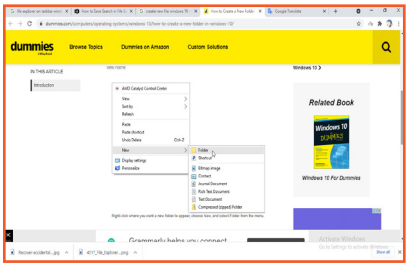


3. Galka cusub ayaa soo bixi doona. Ku qor magaca aad u rabtid galka, kadib guji furaha Enter. Tusaalaheena, waxa aan ku magacawnay galka “School Documents 2016-2017”.



4. Galka gudahiis guji dhinaca midig ee hagaha (mouse) ka dibna dooro fayl cusub (New file) hadba nooca aad rabtid sida word, wordpad, text iwm.

5. Kadib u bixi magic ku habboon



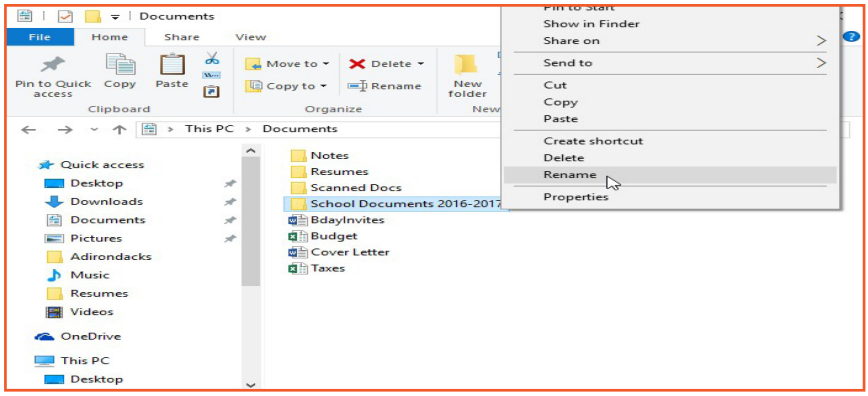
Si aad magaca ugu badasho fayl ama gal:

Waxa aad bedeli kartaa magaca faylka ama galka. Magaca gaarka ah waxa uu fududeynayaa in la xasuusto nooca xogta lagu kaydiyay faylka ama galka. Si aad u badasho magaca fayl ama gal raac tallaabooyinka soo socda:

1. Guji faylka ama galka, sug hal ilbiriqsi, haddana mar labaad guji. Waxa soo baxaya goob qoraal ee laga badali karo magaca.

2. Ku qor magaca aad rabto ka dib guji **Enter**. Magaca ayaa beddelmi doona.

Waxa aad sidoo kale ku gujin kartaa galka furaha midig ee hagaha oo ka dooran kartaa badal Magaca (Rename) liiska kuu soo baxaya (from the menu that appears). Qor oo u badal magaca aad rabto.



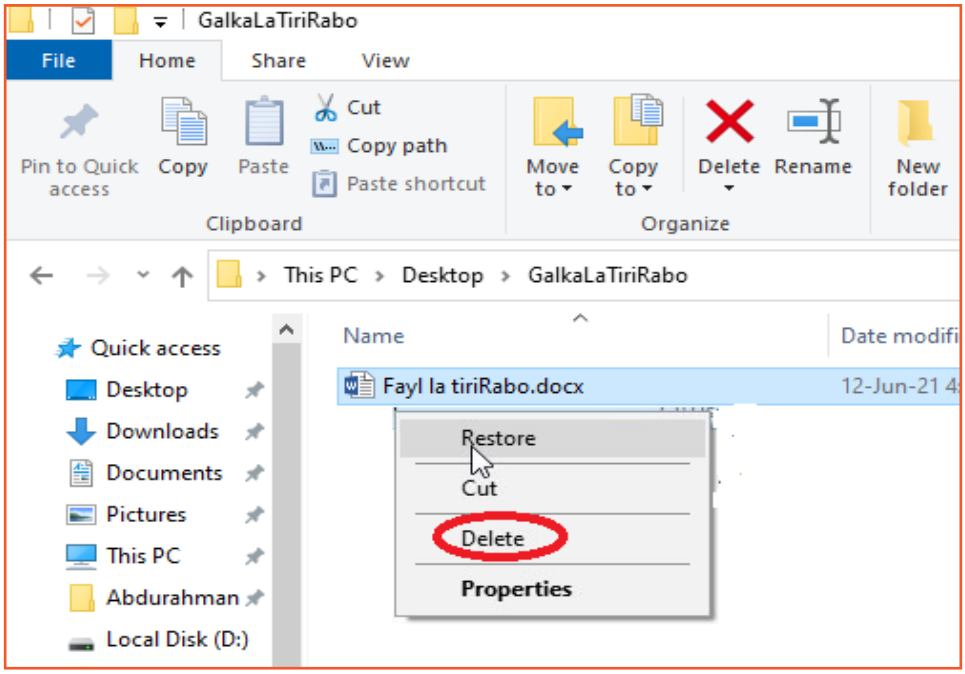
Waxqabadka 7aad:

Waxa aad magaca ka badashaa fayl saran desktop-ka, waxaadna u bixisaa magac la mid ah magaca fayl saran isla desktop-ka, ma kuu ogolaaday in aad hal magac siiso laba fayl oo isku nooc ah, maxaad ka fahamtay waxqabadka?

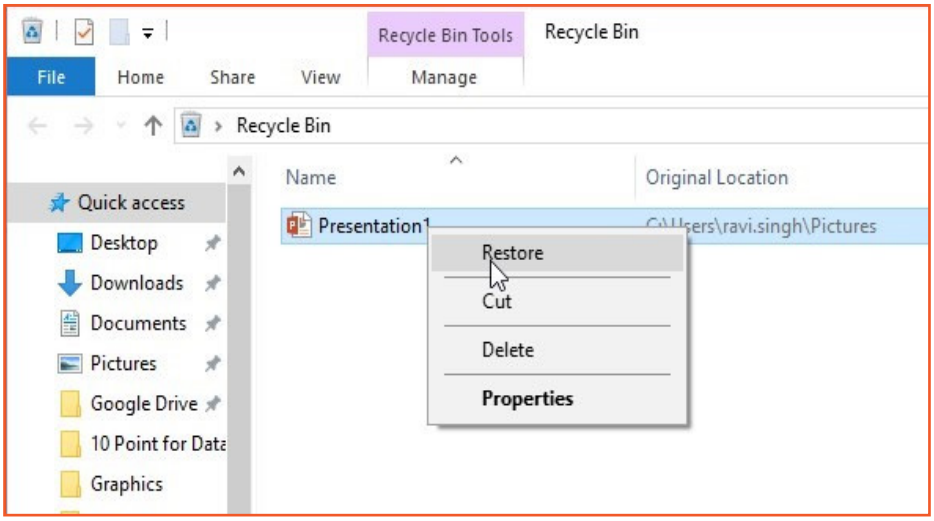
Si aad u tirtirto fayl ama gal:

Haddii aadan u baahnayn in aad fayl isticmaasho, ama gal ay ku jiraan faylal aadan u baahnayn dhammanntood, waad iska tirtiri kartaa.

Si aad u tirtirto fayl ama gal, midigta hagaha ku guji magaca ama astaanta galka ama faylka. Kadib ka dooro tirtir (delete) ee ka muuqda liiska amarada kuu soo baxa. Sidaasna waxaa ku tirmaya faylkii ama galkii. Si aad dhaqso ugu tirtirto gal ama fayl, dooro marka hore kadibna guji batoonka Delete ee looxa furayaasha.



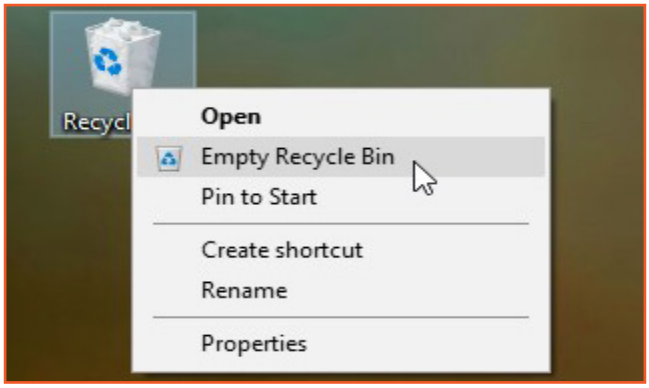
Marka aad tirtirto faylka ama galka, waxaa loo wareejinayaa salladda (Recycle Bin). Haddii aad ka noqoto tirtirida, waad ka soo celinkartaa faylka saladda (Recycle Bin), waxa uuna dib ugu soo noqon doonaa goobtiisa hore. Si aad u soo celiso gal ama fayl waxaad booqataa Salladda (Recycle Bin) oo ka raadi faylkii ama galkii aad soo celin rabtay, kuna guji hagaha midig oo ka dooro liiska kuu soo baxa soo-celi (Restore)



Haddii aad hubto in aad rabto in aad si joogto ah u tirtirto feylka, waxa aad u baahan doontaa in aad faaruqiso saladda (Recycle Bin) adoo raacaya tallaabooyinka.

1. Guji oo ku jiid farta faylka dhinaca astaanta salladda (RecycleBin icon) oo ku saaran desktop-ka. Waxa aad sidoo kale gujinkartaa faylka si aad u dooratid ka dib guji furaha Delete (Delete key) ee looxa furayaasha.

2. Si aad si joogto ah u tirtirto faylka, guji batoonka midig ee hagaha astaanta salladda (Recycle Bin icon) ka dib dooro **Empty Recycle Bin**. Dhammaan faylalka ku jira sallada (Recycle Bin) si joogto ah ayay u tirtirmayaan.

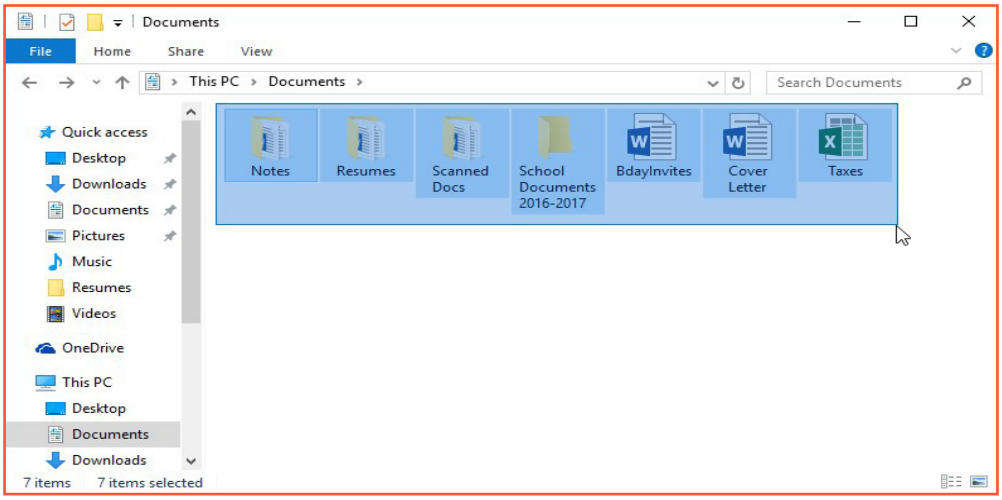


Ogsoonow in hadii aad tirtirtid gal sidoo kale waxaa tirtirmaya dhammaan faylasha ku jira galkaas.

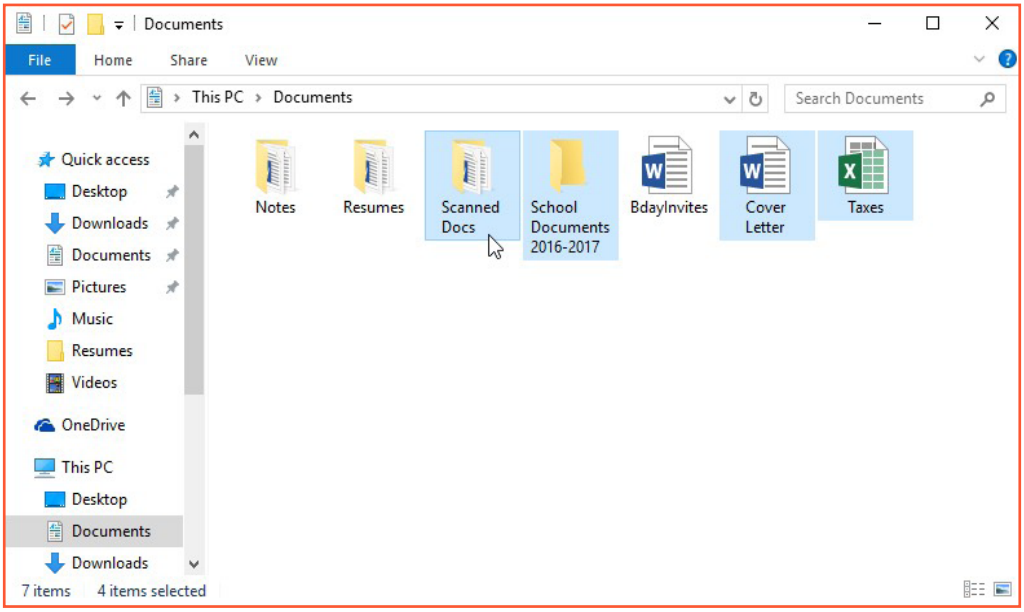
Doorashada wax ka badan hal fayl

Waxaa jira siyaabo dhowr ah oo laqu xulan karo in ka badan hal fayl markiiba:

Si aad u doorato faylal badan: gujii hagaha ka dibna jiid fallaarta hagaha si aad u sawirtid sanduug ku hareeraysan faylasha aad rabto in aad doorato. Marka aad samaysid, sii daa hagaha, faylasha weey doormayaan (the files will be selected).



Hadda waxa aad dhaqaajin kartaa, koobiyeen kartaa (copy) ama waa tirtiri kartaa dhamaan faylashaas dooran halmar.

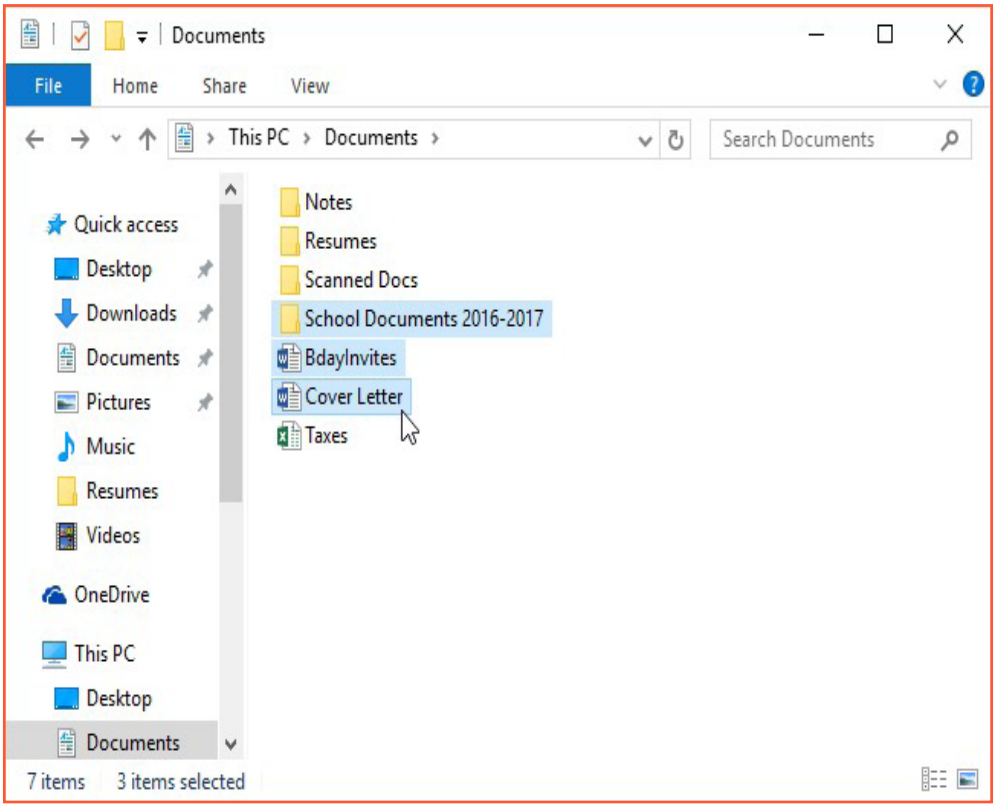


Si aad u doorato faylal gaar ah

Guji oo hay (press and hold) furaha (CTRL) oo ku yaal looxa furayaasha, kadibna guji faylasha aad rabto in aad doorato.

Si aad uga xulato koox faylal ah oo ku jira gal

Guji faylka kowaad oo haay Furaha **Shift** ee looxa furayaaasha, ka dibna guji feylka ugu dambeeya. Dhammaan faylasha u dhaxeeya faylka kowaad iyo kan ugu dambeeya ayaa wada doormaya.



Doorashad dhammaan faylasha

Haddii aad rabto in aad doorato dhammaan faylasha ku jira galka isla halmar, ku fur galka barnaamijka **File Explorer** oo isla qabo furayaasha looxa ee **Ctrl** iyo **A**. Dhamaan faylasha ku jira galka way doormayaan waxa ayna yeelanayaan har ama hoos.

Gunaanad

Casharkaan waxa aan ku soo barangay

1. Fayl waa meel lagu kaydiyo macluumaadka iyo xogta. Faylasha loo isticmaalo kombiyuutarada waxa ay la mid yihiin galalka waraaqaha ee loo isticmaalo faylasha xafiisyada iwm.
2. Waxaa jira noocyo kala duwan oo faylal ah. Waxaa ka mid ah sawirrada dhijitaalka ah, codadka dhijitaalka ah, iyo maqal iyo muuqaal.
3. Gal waa meel lagu ururiyo faylasha, dokumentiyada, galal kale iwm
4. Galka waxaa gudihiisa ku jiri hal ama ka badan oo faylal ah ama xataa galal kale. Waxaa dhici karta in aad aragto gal maran.
5. Waxaad abuuri kartaa fayl ama fayl cusub
6. Waxaad koobiyayn kartaa fayl ama gal hore u jiray.
7. Waxaad rari kartaa oo meelka qaadi kartaa fayl ama gal adoo gaynayaa meel kale
8. Waxaad hal mar dooran kartaa faylal
9. Waxaad tiri kartaa gal
10. Waxaad magaca ka baddeli kartaa fayl ama gal

Layli

1. Abuur fayl cusub, una bixi: “Fasal-B”
2. Abuur fayl cusub, una bixi: “Fasal-T”
3. Abuur fayl cusub, una bixi: “Fasal-J”
4. Abuur Gal cusub, una bixi: “Dugsi”
5. U rar faylasha saddexda ee aad abuurtay galka “Dugsi”
6. Ka badel magaca faylka “Fasal-B” una bixi Fasal-A”
7. Abuur gal kale una bixi “Guri”
8. Dooro hal mar dhamaan faylasha ku jira galka “Dugsi”
9. Koobiyee dhammaan oo gee galka cusub ee “Guri”
10. Hal mar dhamaan tir faylasha ku jira galka “Guri”

Qiimaynta Cutubka

Ka jawaab su'aalahan:

1. Sheeg qaar ka mid ah shirkadaha sameeya nidaamka howlgalka
2. Waxa aad sheegtaa ugu yaraa 4 ka mid ah barnaamijyada Office, waxaad raacisaa noocwalba oo faylasha barnaamijyadaas ka mid ah 3da ama 4ta xaraf ee gadaal ka raaca.
3. Sheeg ugu yaraan 5 magacyada muuqaallada saaran Oogada (Desktop)
4. Tusaale ka bixi aasaaska adeegsiga galalka iyo faylasha, adigoo abuuraya faylal kala duwan, isugu gaynaya gal, qaarkood u raraya gal kale oo cusub, tiraya qaar ka mid ah faylashii, dib u soo cilanaaya qaar ka mid ah kuwii aad tirtay.

Cutubka 6aad: Barashada MS – Word 2013

Hordhac:

Aasaasiyada Ms – Officeka 2013 waxa uu ka kooban barnaamijyada kala ah: Access, Excel, PowerPoint, Word, Outlook, InfoPath Designer, OneNote, Publisher: cutubtankaan, waxaa aan ku baran doonaa mid ka mid ah barnaamijyada office-ka ee ah Aasaasiyada MS – Word

Microsoft Word 2013 waa barnaamij qoraal oo fududeeya diyaarinta dukumentiyo kala duwan. Waxaa lagu diyaarin karaa dokumentiyo aad u bilicsan oo ka kooban qoraal, sawirro, jadwallo iyo kaabayaasha cilmi barista. Sidoo kale barnaamijka MS- Word 2013.

Ujeeddooyinka Cutubka

Dhammaadka cutubka bare-ardaydu waxa ay ay awood u yeelanayaan in ay:

1. Sharxi karaan Muuqaallada saldhigga u ah ee MS Word 2013
2. Abuuri karaan oo furi karaan dokumentiyada
3. Isdhexgelin (insert) karaan, dooran (select) karaan, koobiyeyn (copy) karaan, dhejin (paste) karaan, rari (drag & drop) karaan, tirtiri (delete) karaan qoraalada.
4. Qaabeyaan Qoraalka (Formatting the Text)
5. Midabeyn karaan qoraalka
6. Adeegsan karaan qaababka kaydinta kala duwan ee MS – Word 2013.
7. Daabici karaan boggaga.
8. Habayn karaan kala fogaanta faqradaha
9. Samayn karaan taxane dhibco ah.

Tusmada Cutubka

Cutubkaan waxaanuu ka kooban yahay 6 cashar oo kal ah:

Casharka 1aad: Asaasiyaadka MS Word 2013

Casharka 2aad: Aasaasiyaadka Qoraalka iyo kaydinta Dokumentiga

Casharka 3aad: Habaynta Muuqaalka Bogga (Page layout and formatting)

Casharka 4aad: Diyaarinta Qoraal Taxan (Lists)

Casharka 5aad: Daabicidda Dokumentiyada iyo faqreyntooda

Habka Waxbaridda

1. **Sharaxaad (Fasiraad Macallin)**
    - Casharka waxa uu ku bilaabanayaa macallinka oo sharaxaya:
        - Waa maxay Microsoft Word 2013
        - Faa'iidooyinka isticmaalka Word
        - Kala duwanaanshaha versions Word 2013 iyo wixii ka danbeyay
2. **Waxqabad Gacan-ku-samayn ah)**
    (In kasta oo casharka yahay Word 2013, baraktikalku wuxuu isticmaali karaa Word 2021 maadaama ay la mid tahay ama ka casrisan tahay.)
    - **Abuurida iyo furida dokument hore u jiray**
        - Ardaydu waxay ku baranayaan sida loo abuuro dokumenti cusub iyo sida loo furo dokument hore loo kaydiyey.
    - **Ku qorid qoraal gudaha dokumentiga, tirtirid iyo rarid**
        - Ardayda waxa la barayaa sida loo qoro qoraal, loo saxo, iyo sida qoraalka loogu raro meel kale gudaha dokumentiga.
    - **Daabac qoraal hal bog ah iyo wax ka badan**
        - Ardaydu waxay wax ku baranayaan sida loo daabaco dukumenti, iyagoo hubinaya dejinta bogagga (Page Setup) iyo daabacaada(printer-ka).
    - **Abuurida taxane dhibco leh (Bulleted list)**
        - Ardayda waxa la barayaa sida loo sameeyo liis dhibco leh (bulleted list) si ay si habaysan u qoraan fikradaha.
    - **Diyaarinta dokumenti xirfadeysan**
        - Waxay ku tababaranayaan sida loo qurxiyo dokumentiga:
            - Isticmaalka ciwaanada kal duwan (headings)
            - Cabirka farta & habka (Font size & style)
            - Kal si kashada xariiqda (Line spacing)
            - Hareera bogga iyo habeyn (Page borders & alignment).

Casharka 1aad: Asaasiyaadka MS Word 2013

Su'aal: Horey ma u abuurtay CV soo jiidasho leh adigoo adeegsanaya MS – Word? Maxaad is leedahay wuu kugu kordhiyay hadii aad adeegsan lahay Notepad?

Ujeeddooyinka Casharka

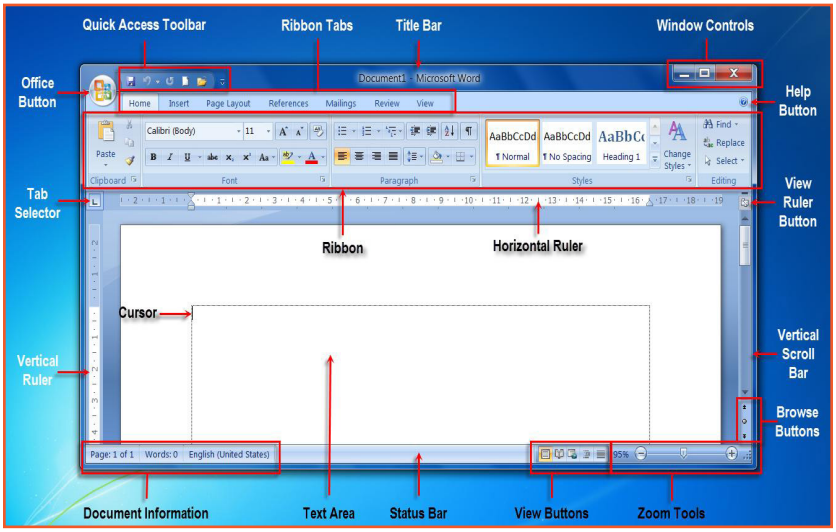
Dhammaadka casharka bare-ardaydu waxa ay awood u yeelanayaan in ay:

1. sharxi karaan Muuqaallada saldhigga ah ee MS Word 2013
2. Sheegi karaan waxa loo isticmaalo "Ribbon"-ka
3. Adeegsan karaan Mastaradda (The Ruler).
4. Sharxi karaan Muuqaalka "Backstage"
5. Ururin karaan ama ballaarin karaan Ribbon-ka.
6. Abuuri karaan dokumenti cusub.
7. Furi karaan dokumenti hore loo keydiyey.

a) **Muuqaalka Guud ee Ms Word 2013**

Muuqaalka Word 2013 wuu ka duwan yahay muuqaallada xirmooyinkii ka horreeyay.

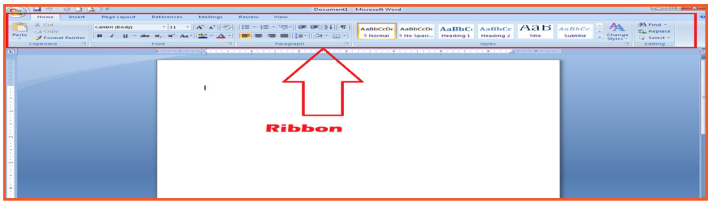
Sawirka hoosena waxaa ka muuqanaaya muuqaalka guud ee Ms Word 2013 iyo qeybaha uu ka kooban yahay



Muuqaallada ugu muhimsan MS Word 2013 waxaa ka mid ah:

1. **Ribbon-ka**

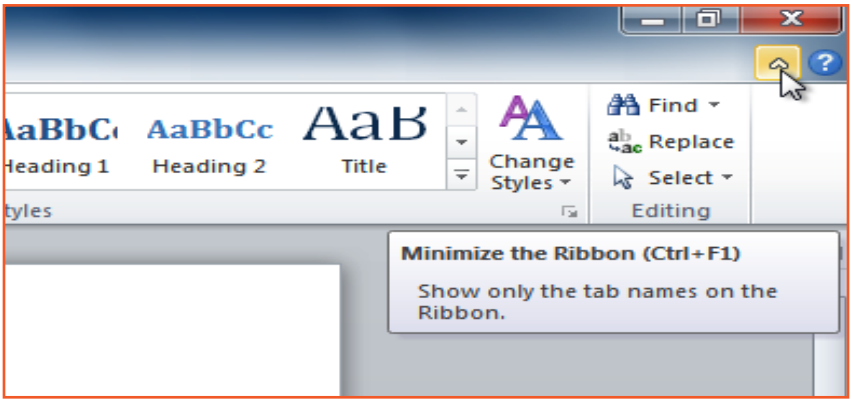
"Ribbon" waa meesha laga helo dhammaan amarrada muhiimka ah ee loo baahan yahay. Waxa uu ka kooban yahay carrabyo (tabs) wata amarro koox kooxaysan. Carrabyada waxaa ka mid ah: Home, Insert, Page layout, References, Mailing, Review and View



2. **Ururinta iyo ballaarinta Ribbon-ka**

"Ribbon"-ka waa la ururin karaa ama la qarin karaa haddii uu qaato bed weyn. Raac- tallaaboyinka soo socda

a. Guji fallaarta dhinaca sare ee midigta "Ribbon"-ka kadib guji "Auto-hide Ribbon" si aad u soo ururiso ama aad u qariso.

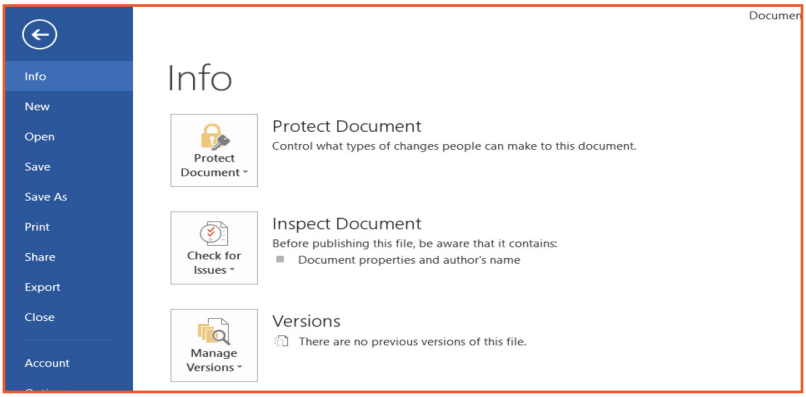


b. Si aad u ballaariso "Ribbon-ka" mar kale Guji fallaarta. Marka "Ribbon" la ururiyo, waxaad ka dhigi kartaa in uu soo muuqdo mar kale adiga oo gujinaya carrabka.

3. **Muuqaalka "Backstage"**

Muuqaalka waxaa laga heli karaa amarada sida Fur (Open), keydi (Save) iyo daabac (print) **Sida aad ku aragto muuqaalka hoose.**

Guji carrabka (File).



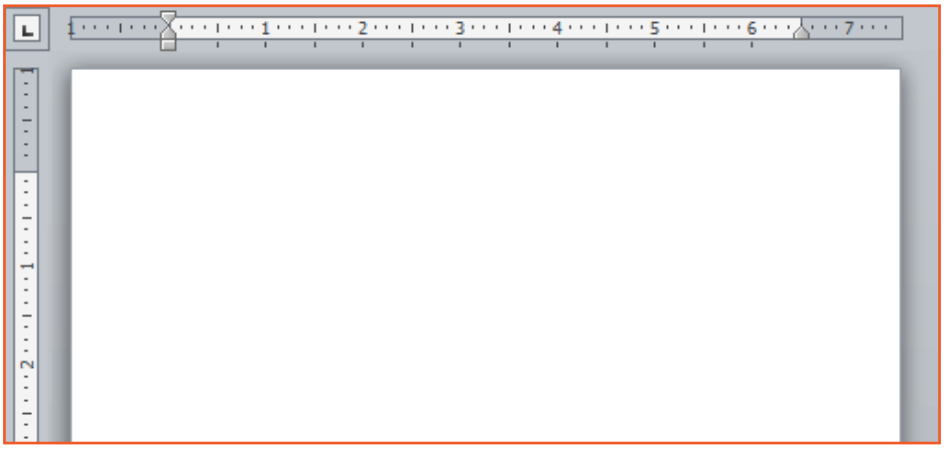
a. Liiska ka muuqda dhinaca bidix midka aad rabto ka dooro oo guji

b. Si aad ugu noqotid dokumentigaada Guji fallaarta ugu sarraysa liiska ee bidixda u jeedda

4. **Mastaradda (The Ruler)**

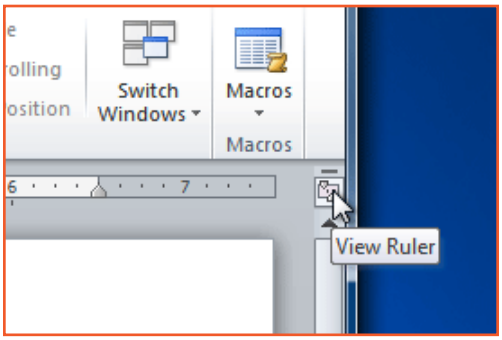
Mastaraddu waxa ay taallaa dhinaca kor iyo dhinaca bidix dokumentiga. Waxa ay

fududeysaa cabbirka saxda ah ee dokumentiga. Waa qarin kartaa si aad u hesho bed ballaaran.



Qarinta iyo muujinta Mastaradda:

a. Si aad u qariso mastaradda Guji Astaanta Muuji (view) mastaradda ee ka muuqata sawirka oo ka qaad doorashada Mastaradda (ruler)



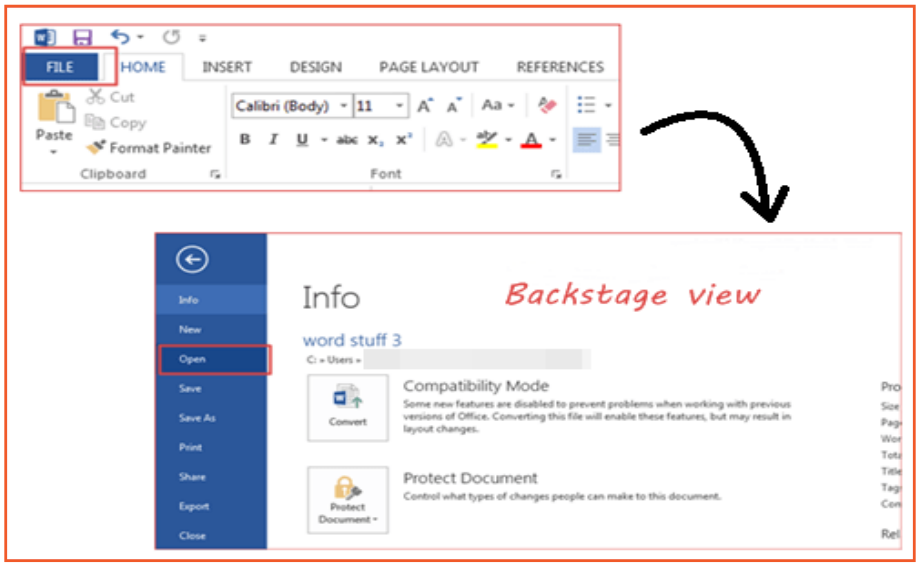
b. Si aad u muujiso mastaradda, Guji mar kale Astaanta muuji (view) ka dibna dooro mastaradda (ruler)

b) **Abuuritaanka iyo Furitaanka Dokumentiyada**

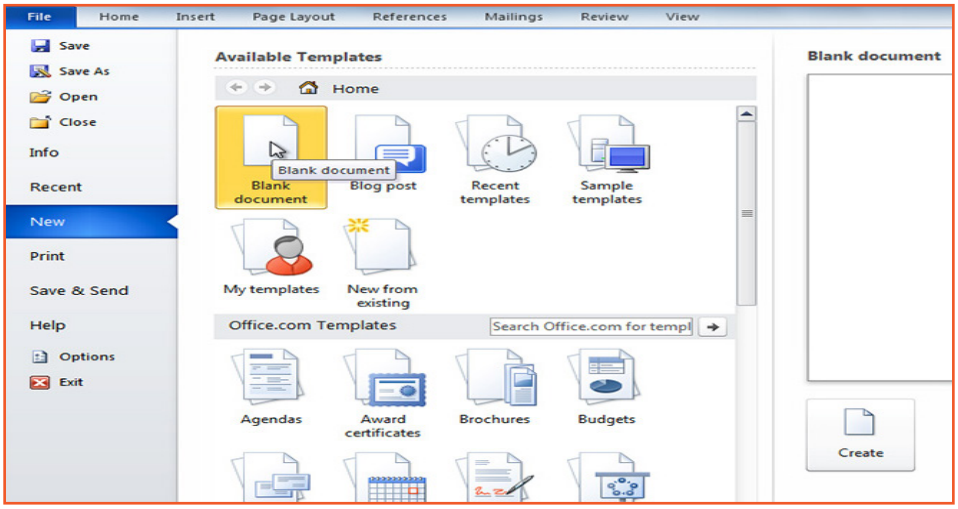
Faylasha MS Word waxaa loo yaqaan documentiyo. Marka aad rabto in aad wax ku qoratid Ms Word, waa in aad abuurtaa dukumenti cusub oo bannaan. Waxaa kale oo aad samayn kartaa in aad furtid dokumenti hore u jiray.

Si aad u abuurto dokumenti cusub:

1. Guji carrabka **File**, ka dib waxaa kuu furmaya muuqaalka "**Backstage**".



2. Dooro "**New**".

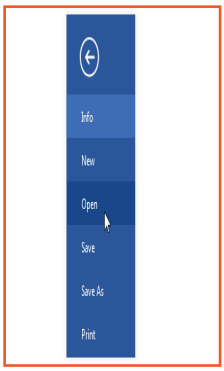


3. Dooro "**Blank document**.

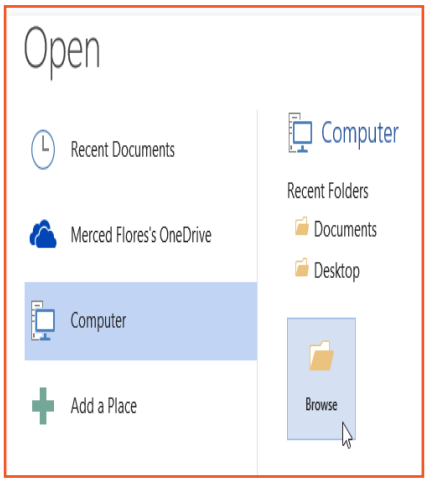
Waxaa kuu furmayo word document cusub oo maran

Si aad u Furto dokumenti horey u jiray:

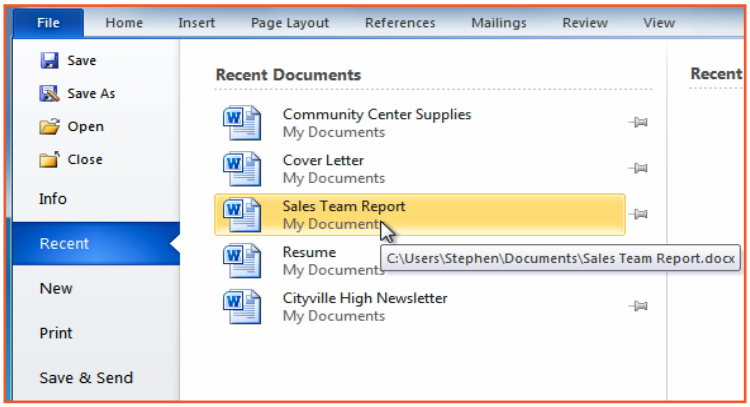
1. Guji "**File**. Waxaa kuu furmaya muuqaalka "**Backstage**".
2. Dooro "**Open**". Waxaa kuu soo baxaya muuqaalka (Open dialog box)



3. Dooro **Computer,** ka dibna guji **Browse,** ka dibna dokumentiga aad rabto, oo Guji batoonka "Open".



Dhinaca kale, Faylashii aad mar dhow furtay waxaad ka heli karta liiska "**Recent Documents**". Ka dib Guji"File" oo dooro **recent** oo sii guji 2 jeer faylka aad rabto.



Waxqabadka 1aad:

Fur Word 2013 waxaa kuu soo muuqanaya dokumenti bannaan. Hubi in uu ballaaran (Maximized) yahay. Soo muuji Mastaradda (Ruler).

Waxqabadka 2aad:

Waxa aan aniga iyo saaxiibkey qoraynaa amarada hoostaga amarka ("File").

Waxqabadka 3aad:

Waxa aan qorayaa magacyada kooxaha ku jira carrabka "View"

Waxqabadka 4aad:

Cilmi Baaris: Waxa aan baarayaa Shan arrimood oo Word 2013 uu uga duwan yahay muuqaal ahaan Word 2007 ama 2010

Waxqabadka 5aad:

1. Fur Word 2013. Abuur dokumenti bannaan
2. Fur dokumenti horey u jiray
3. Xir adiga oo aan keydin

Waxqabadka 6aad:

1. Fur Word 2013.
2. Raadi faylashii ugu dambeeyey ee aad furtay
3. Ka dooro hal fayl oo fur.

Waxqabadka 7aad:

Aniga iyo saaxiibkey waxa aan sharrax buuxa ka bixinaynaa muuqaalka "**Backstage**"

Casharka 2aad: Aasaasiyaadka Qoraalka iyo kaydinta Dokumentiga

Su'aal: Waa maxay muhimadda in qoraalku yeesho xeerar iyo nidaam la raaco?

Ujeeddooyinka Casharka

Dhammaadka casharka bare-ardaydu waxa ay awood u yeelanayaan in ay:

1. Isdhexgelin karaan (**insert**) qoraallada
2. Dooran karaan (**select**) qoraalka
3. Koobiyeyn karaan (**copy**) qoraalka
4. Dhejin karaan (**paste**) qoraalka
5. Raridi karaan (**drag and drop**) qoraalka
6. Tirtiri karaan (**delete**) qoraalka
7. Beddeli karaan eraygii ama weertii la soo helay (Replace)
8. Beddeli karaan xajmiga, magaca iyo midabka farta (Font size, Font Name and Font color).
9. Midabeyn karaan qoraalka
10. Farta ka dhigi karaan mid qaro (bold) leh ama jiifta (italic) ama hoosta ka xarriqan (underline).
11. U beddeli karaan qoraalka far waaweyn ama far yaryar.
12. Kaydin karaan Dokumentiga

Qoraalku waxa uu leeyahay xeerar iyo nidaam loo qoro. MS Word waxa uu fududeeyay in aad tiri karto qoraal kaa khaldamay ama aad badin karto qoraal, sidoo kale waxaa rari kartaa qoraal. Casharkaan waxa aan ku baran doonnaa xirfadaha saldhigga u ah qoraalka sida isdhexgelinta (insert) qoraallada, Doorashada (select) qoraalka, Koobiyaynta (copy) qoraalka, Dhejinta (paste) qoraalka, Raridda (drag and drop) qorallka, iyo tiridda (delete) qoraalka.

Haddaba howsha ugu muhiimsan ee loo baahan yahay waa in qofku xirfad fiican u yeesho hab-qoraalka asaga oo adeegsanaya Ms Word. Waxa aanan qeybaha soo socda ku baranaynaa hab-qoraallada muhiimka ah ee laga heli karo MS Word 2013

a) Habeynta Qoraalka

Halkee ka bilaabaa qoraalka?

Ujiid hagaha (mouse) meesha aad rabto in qoraalka lagu qoro dokumentiga dhexdiisa. Guji hagaha. Barta qoraalka ayaa kuu muuqanaysa

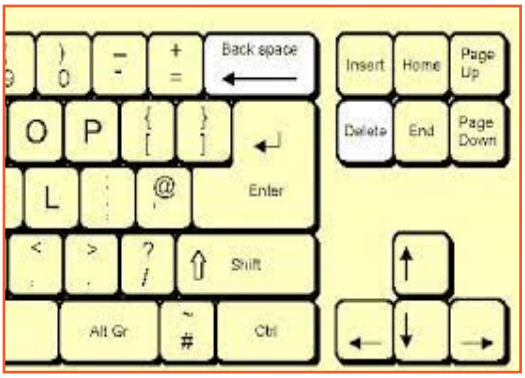
Ku qor qoraalka aad rabto adigoo ka bilaabaaya bartaas.

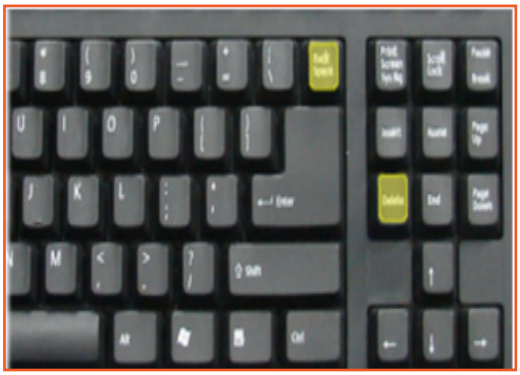
Hadii aad rabto inaad ka durukto meeshaas, u jiid hagaha meesha aad rabtid.

Tiridda Qoraalka (delete text)

1. Dhig barta qoraalka meesha uu yaal qoraalka aad rabto inaad tirtirto.
2. Guji furaha "**BAKSPACE"** ee ka tirsan looxa furayaasha si aad u tirto qoraalka bidixda jira.
3. Guji furaha "**Delete**" si aad u tirto qoraalka midigta xiga.

Meelaha ay ku yaallaan furayaasha "Back space" iyo "Delete" way ku kala duwan yihiin looxadaha furayaasha kala duwan waxa ayse ka siman yihiin qoraallada ku dul qoran furaha.





Doorashada qoraalka:

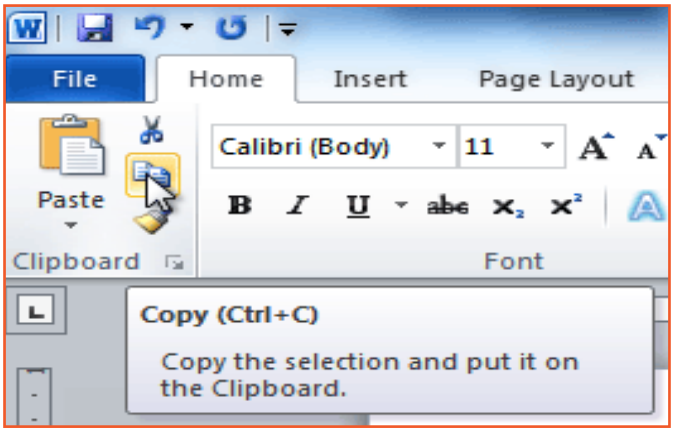
1. Gee barta qoraalka ee ku xigta qoraalka aad rabto inaad doorato
2. Adiga oo Gujinaya hagaha ku jiid qoraal aad rabto in aad doorato.
3. Sii daa hagaha waxaa arki doonta muuqallka hoose oo kale

Tusaalahan fiiri

Teknoolojiyadan waxaa la adeegsadaa kulka qorraxda oo la ururiyo. Bikaacooyin iyo muraayado ayaa lagu aaddiyaa qorraxda, tamarta-noqodka ayaa lagu jeediyaa biyo kujira dhuumo.

Koobiyeeynta iyo dhajinta qoraalka:

1. Dooro qoraalka aad rabto in aad koobi ka sameyso.
2. Guji astaanta **Copy** ee ku taala carabka Home. Waxaad sidoo kale Gujin kartaa midigta hagaha kana dooro amarka copy



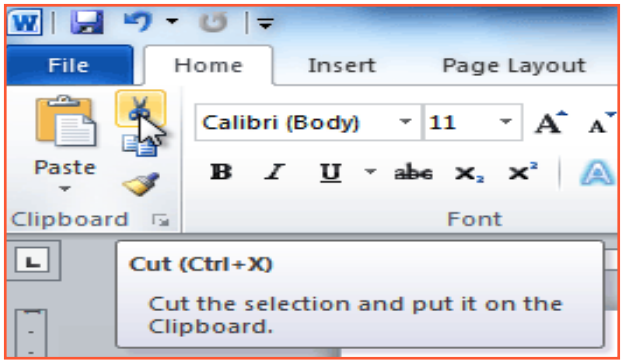
3. Gee barta galinta meesha aad rabto in qoraalka uu kasoo muuqdo.

4. Guji astaanta Paste si qoraalkii aad kobiyeysay ugu dhejiso meesha aad la rabto inuu ka soo muuqdo

b. Jaridda iyo dhajinta (Cut and paste) Qoraalka

1. Dooro qoraalka aad ratto in aad koobbi aad ka sameyso

2. Guji astaanta "**Cut**" waxaad sidoo Kale Guji kartaa midigta hagaha kana dooro **Cut**



3. Guji barta galinta meesha aad rabto in qoraalka uu ka soo muuqdo

4. Guji astaanta PASTE is qoraalkii aad jartay u dhejiso

Jiididda Qoraalka (Drag)

1. Dooro qoraalka aad rabto in aad jiiddo.

2. Guji hagaha oo u jiid qoraalka meesha aad rabto in ay ka muuqato. Waxaad arkeysaa sawir sanduuq yar oo la socda fallaarta hagaha.

3. Sii daa hagaha kadibna qoraalka ayaa soo dagaya bartii aad ku sii daysay.

Fiiri Tusaalahan

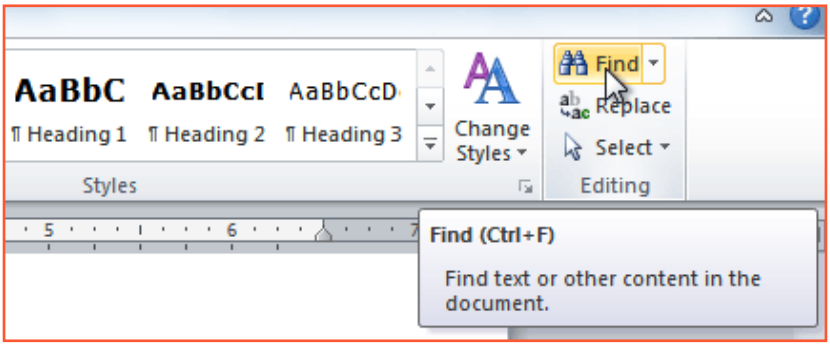
Waxa aan saaxiibkey weydiinayaa: Sidee soollarku uga qayb qaadan karaa buuxinta mobayllada dadka ku nool tuulooyinka ama meel aan danab (koronto) ka jirin ?

Raadin iyo baddel (Find and Replace)

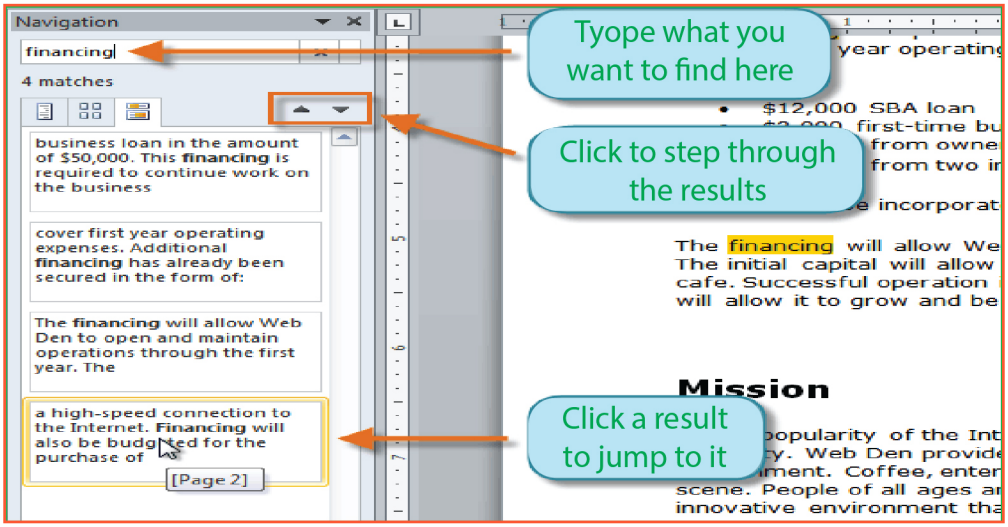
Marka aad ka shaqeyneyso dokumenti dheer, waxaa adag oo waqti kaa qaadaya in aad hesho erey. Ms Word waxa uu kuuu fududeynayaa in aad si fudud ku hesho erayga aad raadinayso adiga oo adeegasanaya amarka (Find)

Raadi (Find) Qoraal

1. Guji astaanta "Find" oo saaran carabka **Home.**

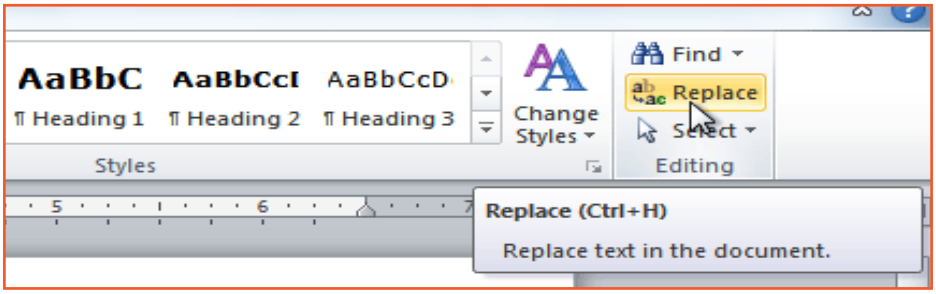


2. Ku qor qoraalka aad rabto inaad ka hesho **Navigation Pane**
3. Haddii qoraalka laga helayo dokumentiga, waxaa lagu muujim doonaa midab hurdi (jaalle), **waxa uuna ka soo muuqan doonaa Navigation Pane.**

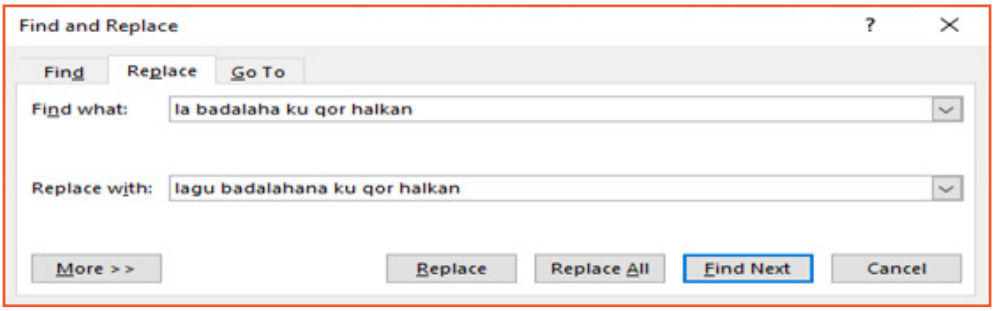


Ku baddelid (Replace)

1. Guji amarka sanduuqa **Replace** adigoo jooga "Home botonka".



2. ku qor sanduuqa "**Find**" waa qoraalka aad rabtid inaad raadisid.



3. ku qor sanduuqa "**Replace with**" qoraalka aad rabto inaad ku bedasho
4. Guji "**Find Text**" ka dibna **Replace**
5. Haddii aad mid mid u badalaysid guji mar walba batoonka "**Find Next**"
6. Haddii aad rabtid in erayga aad raadinaysid ka wada badashed documentiga guji "**Replace All**"

Waxqabadka 1aad:

1. Fur dokumenti horey u jiray.
2. Dooro jumlad (sentence).
3. Koobiyee oo meel kale ku dheji (paste).
4. Dooro jumlad kale.
5. Jar (cut) jumlada oo meel kala ku dheji (Paste).

Waxqabadka 2aad:

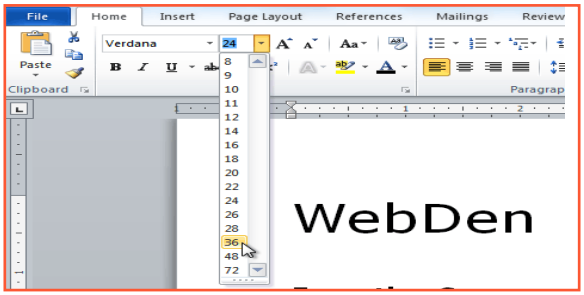
1. Raadi eray ama weer (find)
2. Baddel eraygii ama weertii la soo helay (Replace)

t. Qaabeynta Qoraalka (Formating the Text)

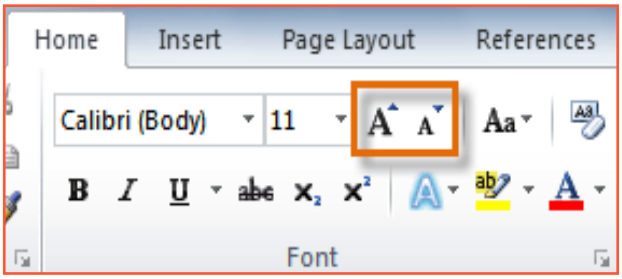
Si loo abuuro loona diyaarisyo dokumentiyo habaysan, waxaad u baahan tahay in aad qaabayso qoraalka. Qoraalka qaabaysan waxa uu kaa caawin karaa in si waafi ah loo fahmo farriintaada. Qoraalka qaabaysan waxaa la muujiyaa meelaha muhiimka ah. Waxaa la tixgeliyaa cabbirka, midabka, waynaanta, ama yaraanta farta iwm.

Waynaynta/yaraynta Farta

1. Dooro qoraalka aad rabto inaad wax ka beddesho.
2. Guji fallaarta ku xigta sanduuqa "Font Size" oo ku taal carrabka **Home**. Taxane tirooyin ah ayaa kuu soo baxaya.
3. Dooro tirada cabbirka ee laga rabo farta. Haddiikale, waxaad ku qori kartaa tirada aad rabto kadibna Guji "**ENTER**".

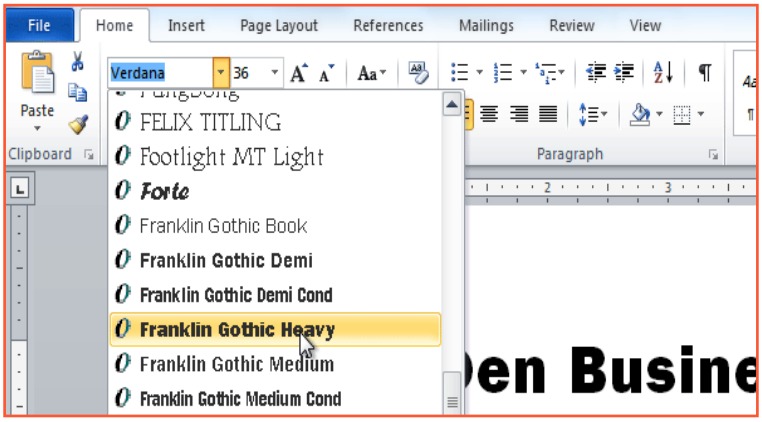


Waxa kale oo aad isticmaali kartaa amarrada ka muuqda sawirka hoose



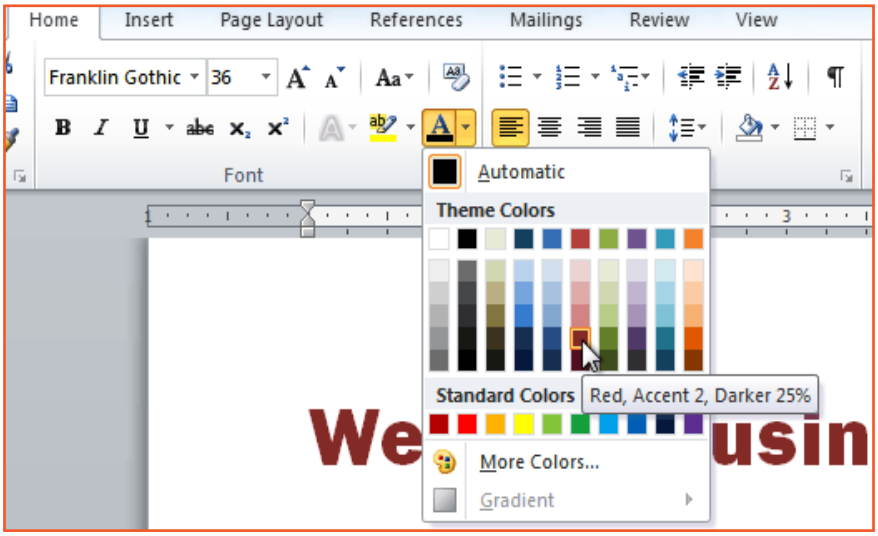
Beddellidda magaca farta (Font Name)

1. Dooro qoraalka aad rabto inaad nooca farta ka beddesho.
2. Guji fallaarta magacyada farta. Taxane qoraal ah ayaa kuu soo baxaya.
3. Dooro magaca farta aad rabto. Haddii kale, waxaad ku qori kartaa magaca aad rabto ka dibna Guji "**ENTER**"



Beddellidda midabka farta (font color)

1. Dooro qoraalka aad rabto in aad wax ka beddesho.
2. Guji fallaarta midabka, middabo ayaa Kuu soo baxaya
3. Ka dooro midabada aad rabto

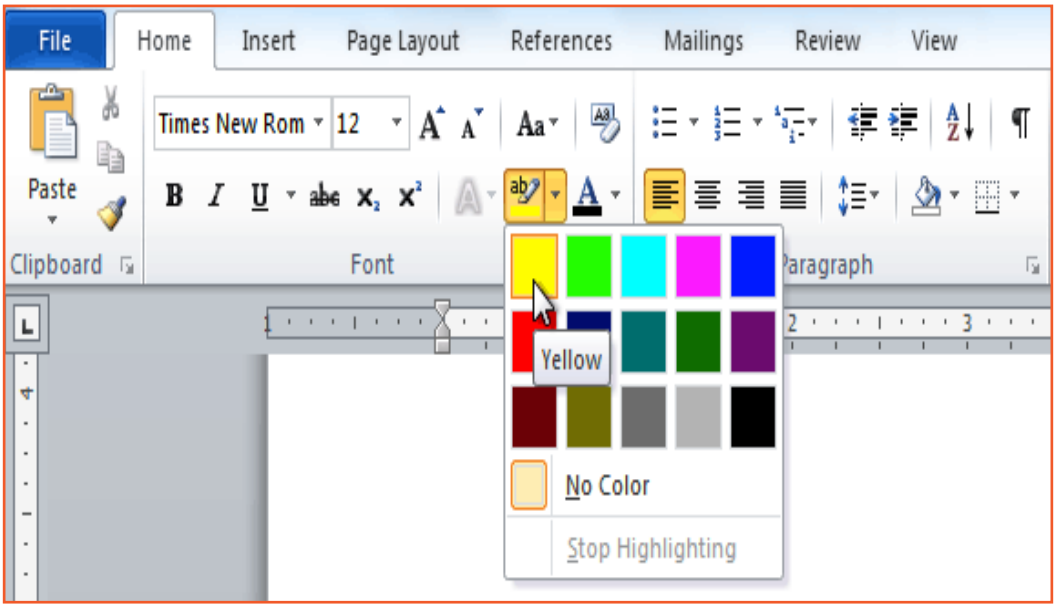


b) Midabeynta Qoraalka

Qoraalada muhiimka ah eek u jira dokumentiga waxaa lagu muujin karaa in loo sameeyo har midab leh si isha akhristaha u qabato marka uu akhrinaayo

Si aad u midabeyso qoraalka

1. Dooro qoraalka aad rabto inaad midabeyso
2. Carrabka Home, Guji fallaarta **Text Highlight Color**. Liis midabbo ah ayaa soo muuqanaya
3. Xulo midabka aad rabto.

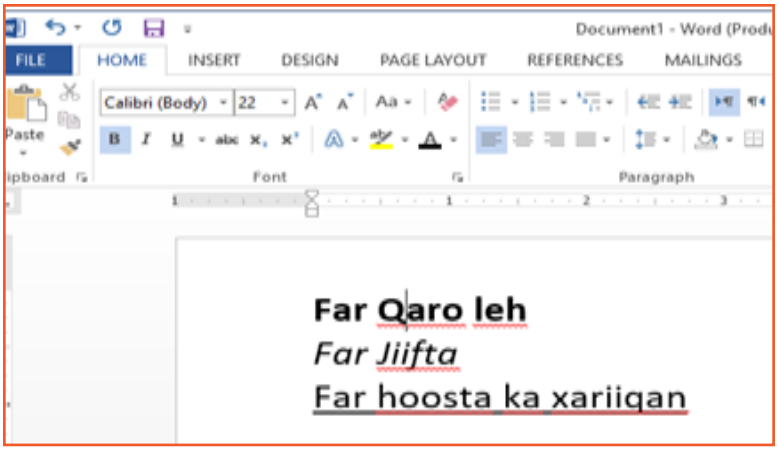


Farta Qarada leh, Jiifta ama hoosta ka xariiqan

Si aad farta uga dhigto mid qaro (**bold**) leh ama jiifta (**italic**) ama hoosta ka xariiqan (**underline**)

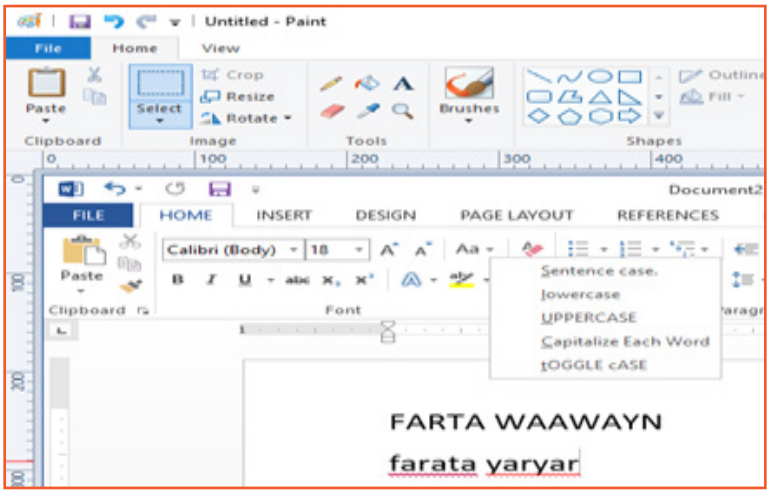
1. Dooro qoraalka aad rabto in aad wax ka badesho

2. Guji **B** ama **I** ama **U** oo muuqda kooxda **Font**



Farta Waaweyn Ama Farta Yaryar (Capital letters or Small Letters)

1. Dooro qoraalka aad rabto inaad wax ka beddesho.
2. Guji amarka "**Change case"** oo ku jira kooxda Font

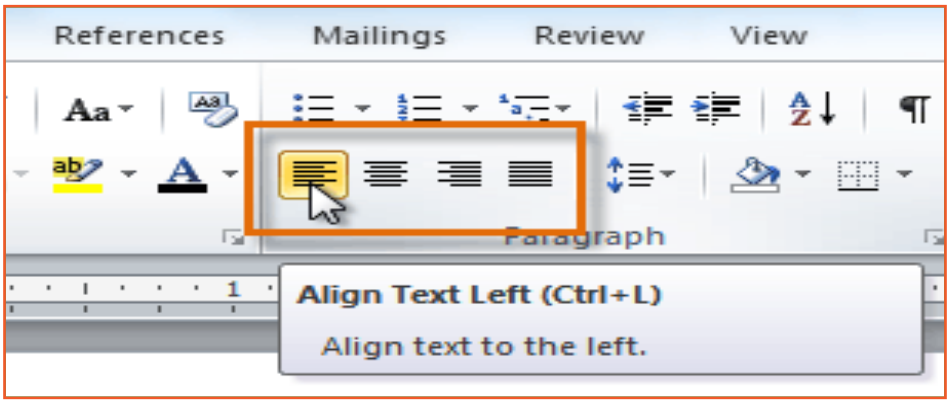


3. Dooro nooca aad u rabtid farta.

Dhinaca Qoraalka (Text alignment)

Dhinaca qoraalka waxaa loola jeeda in erayda isku sadarka ah laga simo dhinaca bidix ama midig ama laga dhigo kuwa dhexda ku wada began

1. Beddel dhinaca qoraalka(text alignment)



2. Dooro qoraalka aad rabto inaad wax ka beddesho.
3. Ka dooro mid ka mid ah farta dhinac xulasho ee muuqata sawirka kare.

Waxqabadka 3aad:

1. Fur document cusub ka dibna u samee qoraalka midab
2. Ka badel midabki hore una samee midab cusub
3. U bedel qoraalka farwaawayn
4. U jihee qoraal qaybta kore dhexda, qaybta dhexe midig, qaybta dambana bidix

c) Kaydinta Dokumentiga

Waxaa muhiim ah in aad ogaatid sida loo kaydiyo dokumentiyada aad ka shaqaynaysid. Kaydinta dokumentiyada waxa ay kaa saacidaysaa in uusan baabi'in dokumentiga haddii kombiyuutarku damo ama korantadu baxdo.

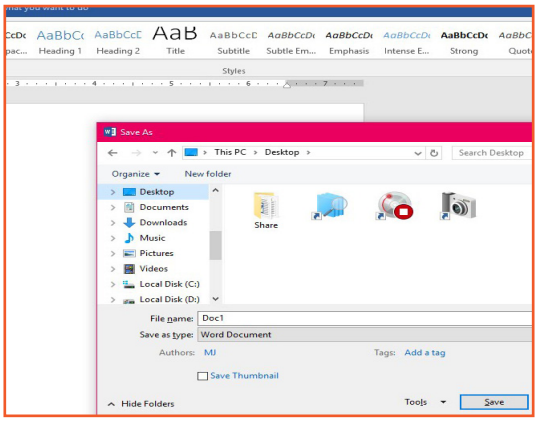
i. Kaydin (Saving)

Keydi dokumentiyada (save documents).

Markaad sameysid dokumenti cusub ee micrsoft word ka waxaad u baahan doontaa in aad keydiso.

1. Guji "**File**" ka dibna ka dooro save ama toos u guji astaanta **Save** ee hoos ka muuqato

2. Ka dib dooro meesha aad rabtid in aad ku kaydiso
3. Magaca aad rabtid u bixi faylka ka dibna guji batoonka midigta hoose ee **Save**



Keydin nooc gaar ah (Save as)

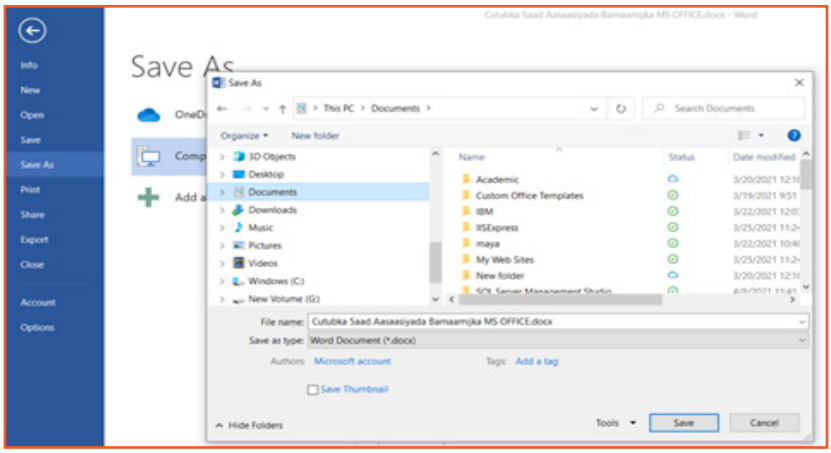
Save As waxa ay kuu ogolaaneysaa inaad doorato magaca ama meel cusub oo aad ku keydineysid dokumentigaaga.

Si aad u kaydiso fayl cusub

1. Guji "**File**" ka dibna ka dooro save ama toos u guji astaanta **Save** ee hoos ka muuqato.

2. Dooro "**Save As**".
3. Sanduuqa Save as ayaa soo baxaya. Xulo meeshaaad rabto inaad ku kaydiso dokumintiga
4. Waxaad ku qortaa magaca dokumintiga, kadibna Guji "Save".

Waxaad ku kedydin doontaa Dokumentiyada **My Documents.**



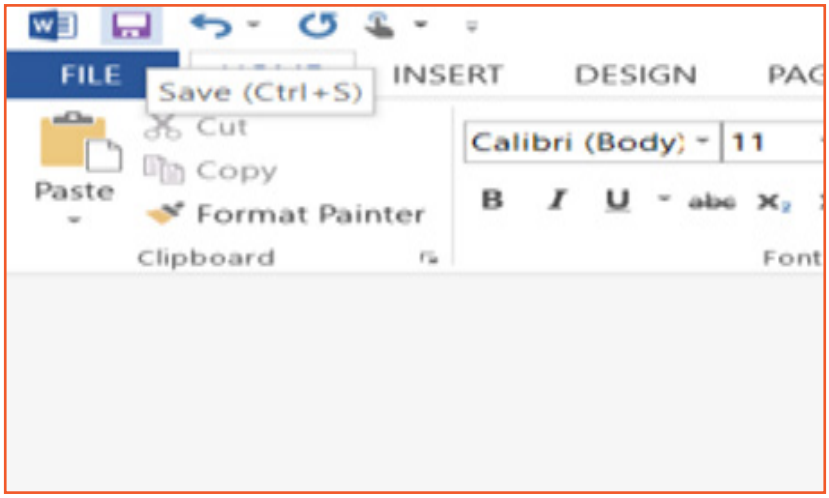
Haddii fayl hore u jiray oo kuu furan aad rabtid in aad kaydiso isla magacii hore

1. Guji astaanta kaydi (Save)
2. Dokumentiga ayaa lagu keydiyaa meesha uu markaas kuu yaal isla magacii faylka.

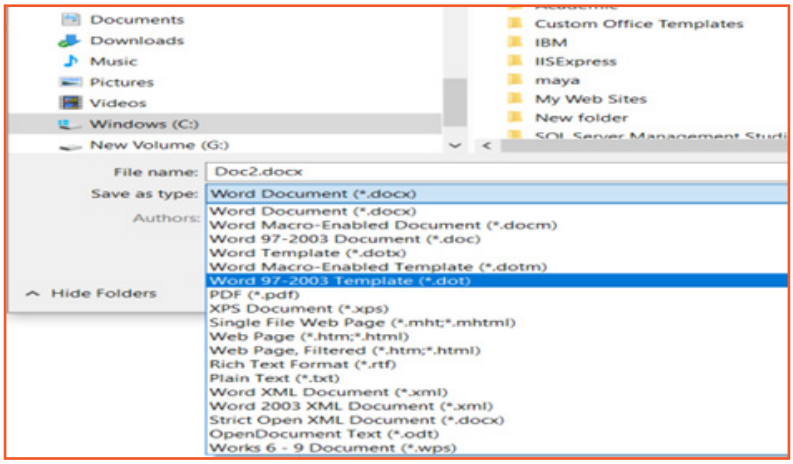
ii. Habab kale oo loo keydiyo dokumentiga

Waxaad dokumentigaaga la wadaagi kartaa qof kasta isticmaalaya Word 2013 ama 2007 sababtoo ah waxa ay isticmaalayaan qaab isku mid ah. Haddii aad rabtid in aad la wadaagto dokumintiga qof isticmaalaya xirmo hore waxaad u baahan doontaa inaad u keydiso sida dukumeentiga Word 97 - 2003

Si aad ugu kaydiso dokumentigaaga Word 97-2003



1. Guji botonka "File"
2. Dooro **Save as**
3. Ka dooro "**Save as Type**"

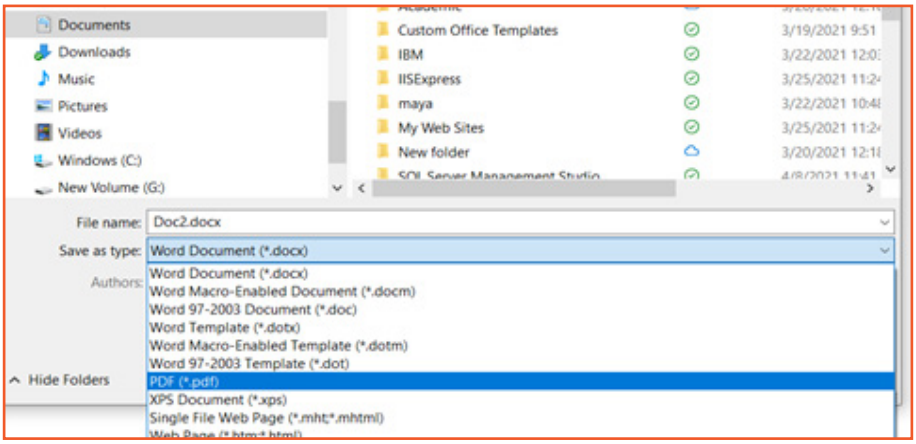


4. Dooro nooca file ee aad rabto inaad ka dhigto faylkaaga ee "**word 97-2003**"
5. Waxaad ku qortaa magaca dokumintiga, kadibna guji astaanta "Save"

Dokumentiga u keydi nooca PDF:

1. Guji Botonka "File".

2. Dooro Save as.
3. Ka dooro **"Save as type" PDF**.



Waxqabadka 4aad:

1. abuur fayl **word** ah
2. Dooro meesha aad rabto inaad ku kaydiso dokumintliga
3. Magaca aad doonto u bixi dokumintiga.
4. Ka dibna kaydi
5. Kaydi faylka mar kale adoo nooca faylka u badalaaya **pdf**

Waxqabadka 5aad:

1. Fur dokumenti hore
2. Adeegso kaydinta Save As oo ka beddel magaca dokumentiga
3. Nooca kaydinta ka dhig word 2003

Casharka 3aad: Habaynta Muuqaalka Bogga

Su'aal: maxaa waraaqaha qaarna joog loogu daabacaa qaarna jiif?

Ujeeddooyinka Casharka

Dhammaadka casharka bare-ardaydu waxa ay awood u yeelanayaan in ay:

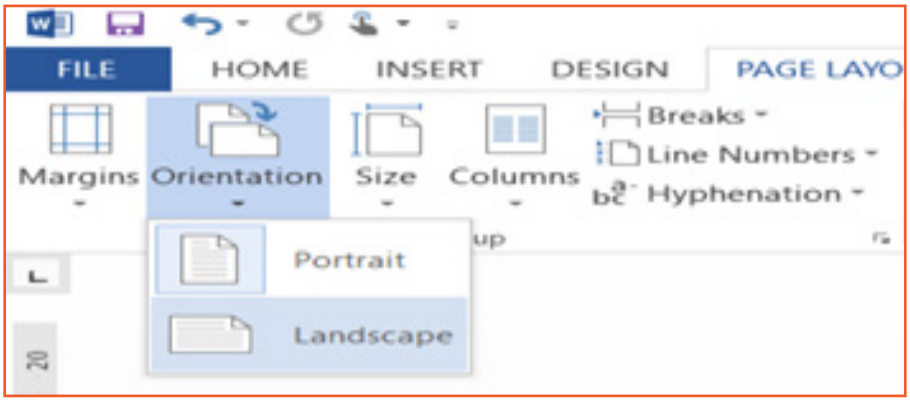
1. Habayn karaan muuqaalka bogga
2. Jihayn karaan bogga (page orientation)
3. Badeli karaan cabbirka bogga
4. Badeli karaan hareeraha bogga

Microsoft Word waxa uu bixiyaa qaabab kala duwan oo bogag iyo xulasho qaabeyn ah oo saameynaya sida qoraalka uga muuqdo bogga. Waxaad xariirin kartaa jihada bogga iyo cabbirka waraaqaha, waxa ayna ku xiran tahay sida aad u rabto dokumentigaaga in uu u muuqdo.

Jihaynta Bogga (page orientation)

Si aad u bedesho jihada bogga

1. Dooro carrabka "**Layout**"
2. Guji amarka "**Orientation**" ee ka tirsan kooxda Setup page



3. **Guji Portrait ama Landscape si aad u bedesho jihada bogga**

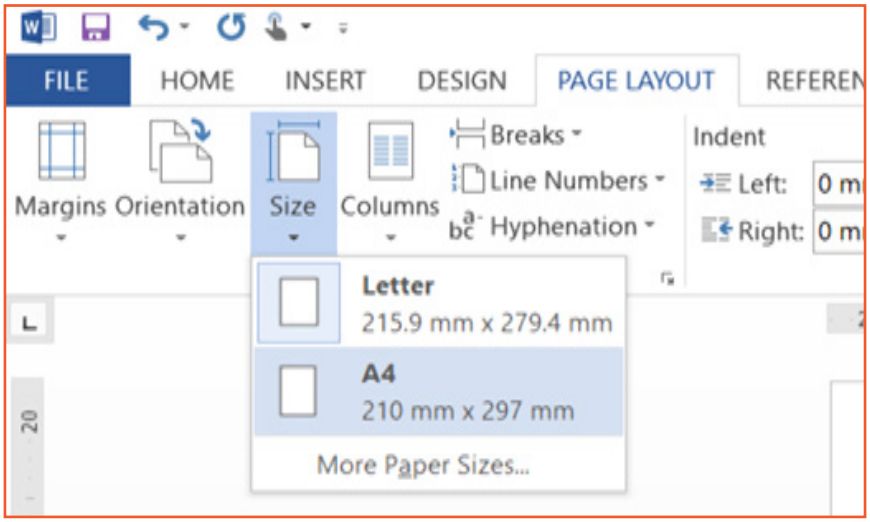
Qaabka "Landscape' macnaheedu waxa uu yahay in boggu uu u jeedo si jiifa, halka portrait format loola jeedo si ligan (qotonta).

Beddel Cabbirka Bogga: (change page size)

Si aad u bedesho cabirka bogga:

1. Dooro carrabka "Layout".

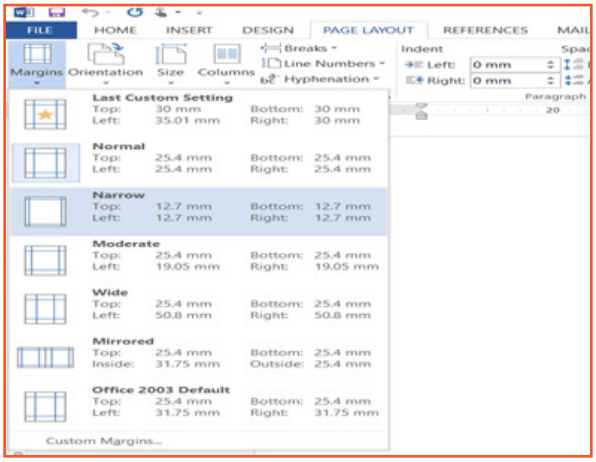
2. Guji amarka "size". Waxaa soo baxaya qaabab, ka dooro qaabka boggaada.



Baddel Hareeraha Bogga: (page margins)

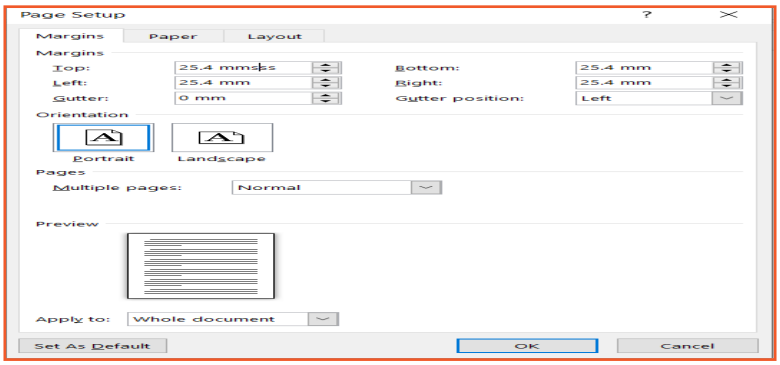
Si aad wax uga badesho cabirka qoraalka iwm u jirsanayo hareeraha bogga:

1. Dooro bogga Layout ka "**Page Layout**" botonka.
2. Guji astaanta "**Margins**"
3. Guji "**predefined margin size**"-ka aad rabtid



Si aad u isticmaasho "Margin" kuu gaar ah

1. Dooro **Page Layout.** Guji **Margins**
2. Guji "**Margins**" ku jira carrabta "**Page Layout**"
3. Dooro **Custom Margins.** Waxa uu ku geynayaa muuqaalka soo socda
4. Isku hagaaji xajmiga dhinacyada bogga ee aad rabtid, kadibna Guji OK.



Waxqabadka 1aad:

1. Fur bog word wax ku qoran yihiin
2. Bedel jihada bogga
3. Badel hareeraha bogga

Waxqabadka 2aad:

1. Fur bog word wax ku qoran yihiin
2. Badel hareeraha bogga kuu gaar ah adoo isticmaalaaya "Custom margins"

Casharka 4aad: Diyaarinta Qoraal Taxan

Su'aal: qoraallada qaar ma u baahan yihiin in ay yeeshaan qaybo si habaysan la isugu xijinaayo oo la taxaayo? Maxay ku kordhinaayaan qoraalka?

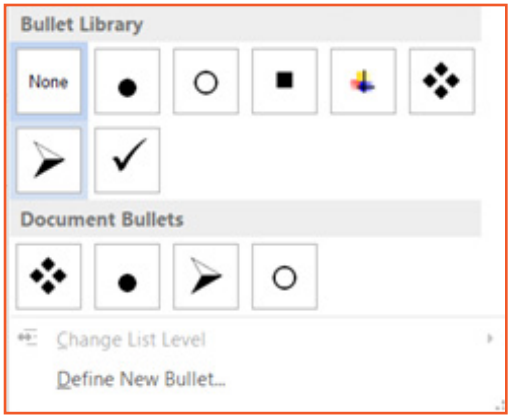
Ujeeddooyinka Casharka

Dhammaadka casharka bare-ardaydu waxa ay awood u yeelanayaan in ay:

1. U samayn karaan dhibco ama nambarro qoraalka
2. Sheegi karaan noocyada dhibcaha ama nambarrada
3. Baddeli karaan midabka dhibcaha

Qoraalka taxan ama lambareysan waxaa loo isticmaali karaa dokumentiyada si ay u qaabeeyaan, u habeeyaan, una muujiyaan ahmiyadda qoraalka.

- Ciwaankaan waxa aan ku baran doontaa sida loo diyaariyo qoraallo taxan oo lambareysan (1,2,3,..) ama dhibcaysan(.) ama calaamado gaar ah wata sida ka muuqata sawirka.

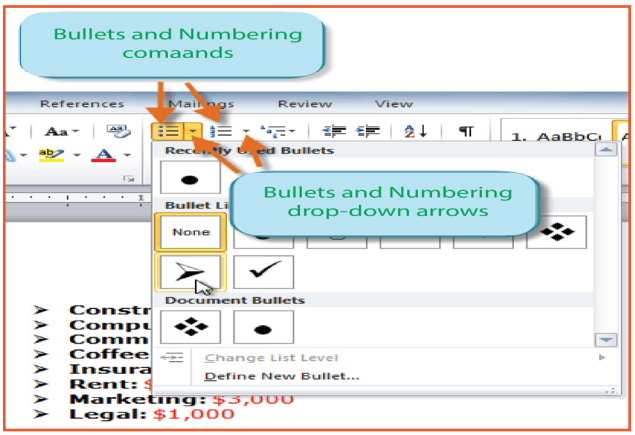


a) **Adeegsiga Dhibcaha iyo Lambarrada**

Marka aad rabto qoraalkaada in aad u sameyso taxanayaal waxaad adeegsan kartaa dhibco ama tirooyin iwm. MS Word waxa uu kuu fududeynayaa hawshaas.

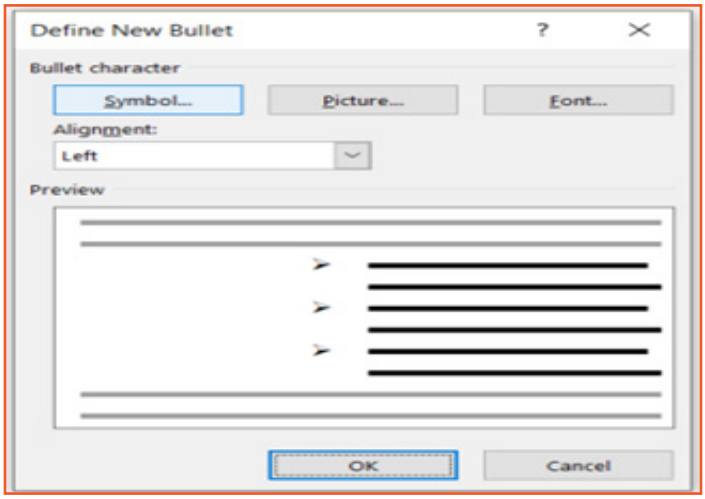
Sameynta taxane dhibco leh

1. Dooro qoraalka aad rabtid
2. Guji fallaarta "**Bullets**" ama "**Numbering**" oo ku taal carrabka "**Home**".
3. Dooro dhibcaha ama lambarka aad rabto in uu ka soo muuqdo dokumentiga.
4. Si aad uga saarto dhibcaha ama lambarrada, dooro qoraalka ka dibna guji amarka "**Bullets or Numbering**".

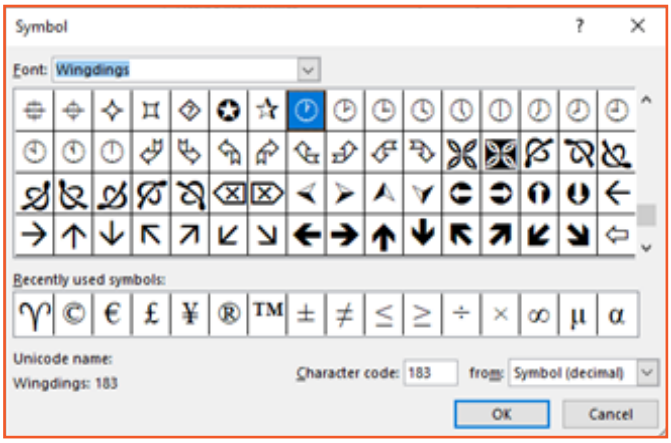


b) **Adeegsiga Dhibcaha**

1. Dooro qoraal taxan oo horey u jiray
2. Guji fallaarta" **Bullets**"
3. Dooro fallaarta "**Define New Bullet**" waxaa ku soo baxaya muuqaalkan hoose



4. Guji "**Symbol**" waxaa kuu soo muuqanaya sawirkan



5. Guji falaarta "**Font**" ka dib Dooro farta "Wingdings" waayo waxa ay leedahay calaamado.
6. Ka Dooro Calaamadda aad rabtid.
7. Guji **Ok**

c) **Sida loo beddelo midabka dhibcaha**

1. Qor qoraalka taxanaha ah ee hoose

   Dhismaha $20,000

   Kombuyutar $25,000

   Qalabka shaaha $12000

   Caymis $800

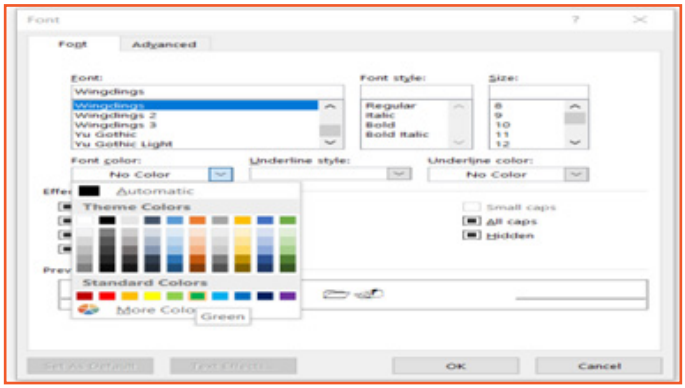
   Kiro $10,000

   Suuqgeyn $3000

2. Dooro qoraalka taxan ee aad qortay
3. Guji fallaarta" **Bullets**".
4. Dooro fallaarta "**Define New Bullet**", xulo nooca calaamadda hoose, waxaa kuu soo baxaya muuqaalkan.

- Dhismaha $20,000
- Kombuyutar $25,000
- Qalabka shaaha $12000
- Caymis $800
- Kiro $10,000
- Suuqgeyn $3000

5. Guji bottonka "**Font**". Ka dib dooro **"Font Color"** Waxaa soo muuqanaya midabada farta.
6. Ka xulo midabka aad rabto.



7. Guji **Ok,** waxaa kuu soo baxaya muuqaalkan ee liiski kuu qornaa, ayadoo leh hadba midabki aad dooratay

8. Guji OK si uu u qaato midabka. Fiiri tusaalahan.

- Dhismaha $20,000
- Kombuyutar $25,000
- Qalabka shaaha $12000
- Caymis $800
- Kiro $10,000
- Suuqgeyn $3000
- Sharci $1000

d) **Taxane Heerar Leh**

Waxaa sameyn kartaa taxane uu taxane kale hoos yimaado. Taxanayaashaas waxa ay noqon karaan mid dhico leh ama lambarro.

Sida ka muuqata tusaalaha soo socda:

- Waxa aan walaala nahay Faadumo iyo Nasro
  - Faadumo waxa ay dhashay saddex carruur
    - Maxamed
    - Xaliimo
    - Sahro
  - Nasro waxa ay dhashay afar caruur ah
    - Caasho
    - Samiiro
    - Faarax
    - limaan
- Waxa aan walaala nahay Jaamac iyo Geeddi
  - Jaamac waxa uu dhalay shan carruur ah
    - Samiiro
    - Cali
    - Xusseen
    - Falis
    - Nimco
  - Geeddi waxa uu dhalay afar carruur ah
    - Guuleed
    - Mahad
    - Sahra
    - Nasteexo

Sameynta Taxane heerar leh.

1. Qor liiska aad rabto, isticmaal batoonka "**tab**" si aad heerar kala duwan ugu samayso sida qoraalkan hoose

Waxa aan walaala nahay Faadumo iyo Nasro

Faadumo waxa ay dhashay saddex carruur

Maxamed

Xaliimo

Sahro

Nasro waxa ay dhashay afar caruur ah

Caasho

Samiiro

Faarax

limaan

Waxa aan walaala nahay Jaamac iyo Geeddi

Jaamac waxa uu dhalay shan carruur ah

Samiiro

Cali

Xusseen

Falis

Nimco

Geeddi waxa uu dhalay afar carruur ah

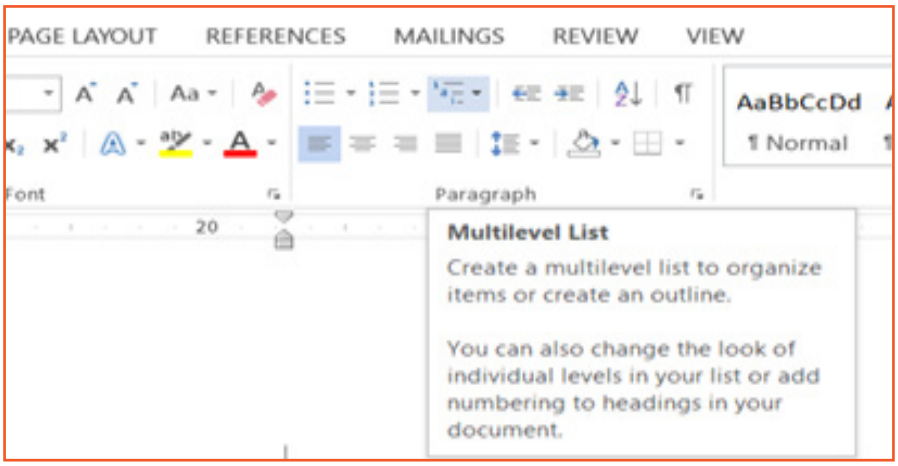
Guuleed

Mahad

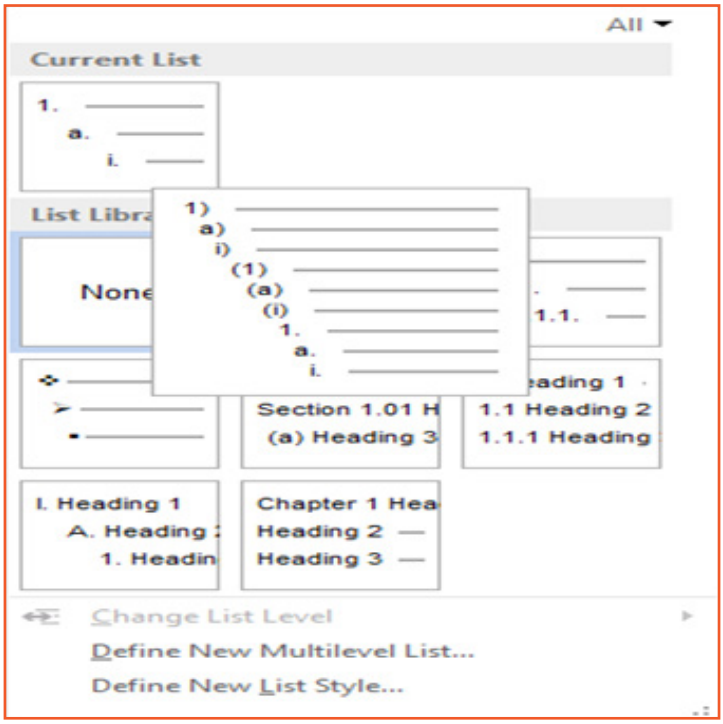
Sahra

Nasteexo

2. Dooro qoraalka aad samayso ama aad rabto in aad ka dhigto taxane heerar leh.
3. Guji amarka "**Multilevel List**" oo ku yaal carrabka "**Home**"



4. ka dooro nooca heerarka aad rabtid



Si aad u beddesho heerka Sadarka

1. Dhig barta bilowga "**insertion point**" bilowga sadarka

- Soomaaliya
  - Banaadi
    - Hodan
    - Howlwadaag
    - Huruwaa
    - Wartanabadda
    - Shibs
    - Kaaraan
    - Yaaqshiid
    - Wadajir
  - Awdal
    - Baki
    - Boorame
    - Zaylac

2. Guji carrabka" **Tab**" si aad u siyaadiso heerka

- Waxbarashada iyo heerarkeeda
  - Heerka
    - Dugsi Quraan iyo Xanaano
    - Dugsi Hoose
    - Dugsi Dhexe
    - Dugsi Sare
  - Jaamacad

- Heerka Kowaad (Bachelor Digree)
- Heerka Labaad (Master Digree)
- Heerka Saddexaad (PHD)

3. Qabo" **Shift**" kadibna riix "**Tab**" si aad u dhintid Heerka

Waxqabadka 1aad:

Samee qoraal leh dhibco kala duwan oo hadana kala heer ah

Waxqabadka 2aad:

Samee qoraal leh dhibco kala duwan oo leh midabbo kala duwan

Casharka 5aad: Daabicida Dokumentiyada iyo faqreyntooda

Su'aal: Maxay ku kala duwan yihiin faqrada (Paragraph) marka laga dhigo safka kowaad (first line) iyo hanging?

Ujeeddooyinka Casharka

Dhammaadka casharka bare-ardaydu waxa ay awood u yeelanayaan in ay:

- Sharixi karaan sida dokumentiyada loo daabaco
- Daabici karaan dhammaan dokumentiyada

Waxa aan soo barannay sida dokumentiyada loo qoro, looga habeeyo xagga farta, muuqaalka, jihada, cabirka bogga, loo diyaariyo qoraal taxane ah iwm.

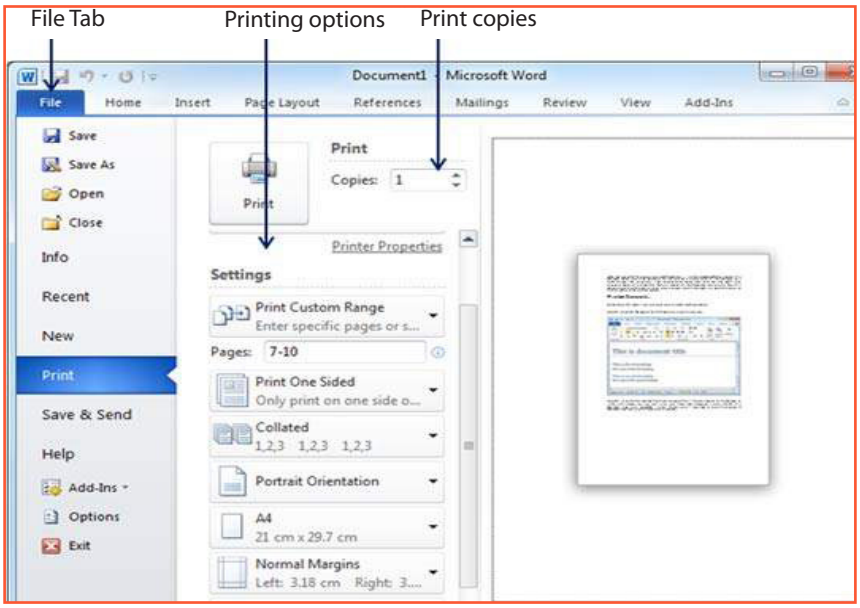
Waxaa lagama maarmaan ah in la daabaco qoraalkaas si loogu badelo dokumenti ku qoran waraaqo. Casharada ku qoran waraaqaha iyo imtixaanka waa dokumentigii oo la daabacay.

Taas waxa ay tilmaamaysaa in MS Word uu leeyahay hab loogu tala galay daabacaadda dokumentiyada.

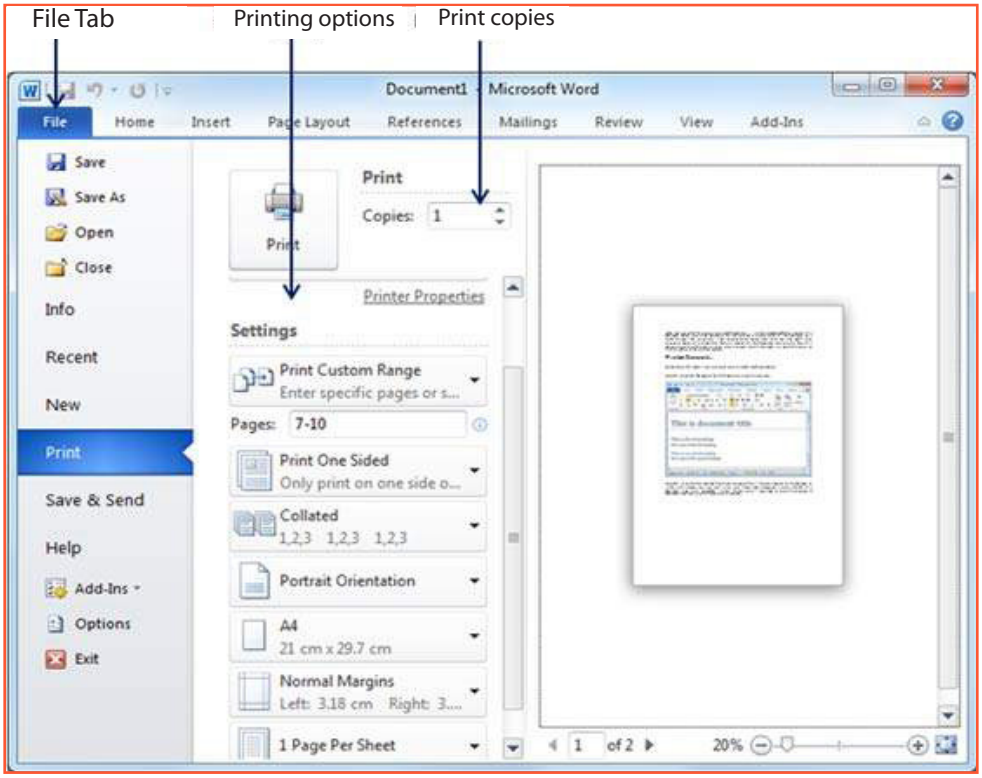
a) **Habraaca Daabicitaan**

Si aad u aragto muuqaalka daabacaadda, ka hor inta aadan daabicin dokumentiga waxaad u baahan tahay in aad aragto muuqaalka ay yeelanayso warqadda aad daabaceysid adoo raacaaya tallaabooyinkaan:

1. Guji "File" si aad u tagto muuqaalka "**Backstage**"…
2. Dooro Daabac"**Print**", waxaa kuu soo baxaya muuqaalka hoose



Waxa kala dooran kartaa noocyo tilmaamo oo kala duwan sida ka muuqata sawirka hoose



Sawirka waxa uu ka kooban yahay qeybaha soo socda (fiiri jadwalka)

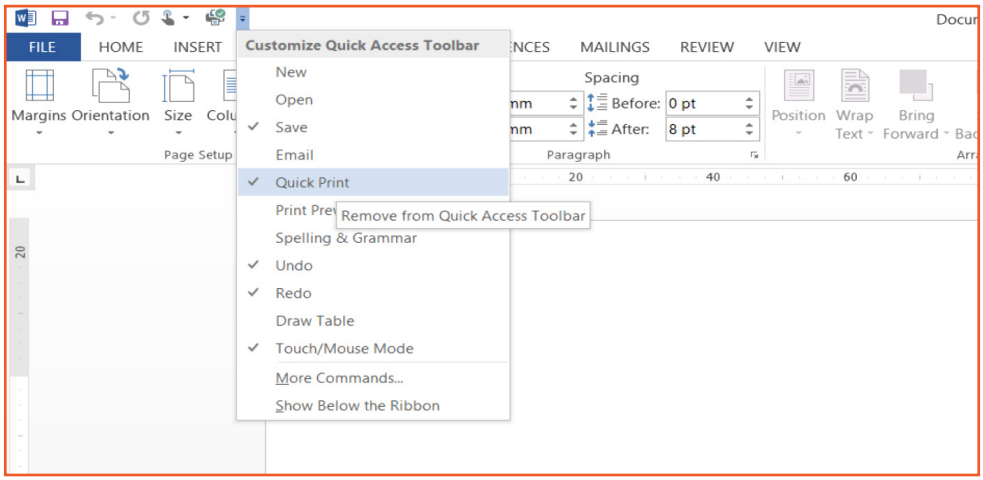
S.No	Faafaahin
1	**Tirada Warqadaha la koobiyeynayo (Copies)** Ku qor tirade la koobiyeynaayo, asal ahaan waxaa dooran 1
2	**Daabacaad gaar ah (Print Custom Range)** Ku qor lambarka Xulashada Bogagga, haddii aad rabto inaad daabacato dhamaan bogagga 7 ilaa 10 markaa waa inaad sheegtaa doorashadan sida 7-10, waxa uu daabacayaa oo kaliya boggaga 7aad, 8aad, 9aad iyo 10aad.
3	**Hal dhinac daabac (Print One Sided)** Asal ahaan, waxaad daabaceysaa hal dhinac. Haddii aad rabto in warqadda laba dhinac laga daabaco ka dooro xulashooyin kale.
4	**Israacin(Collated)** Waxaa bogagga u daabici karta in aad isu raaciso 11 22 33 iwm
5	**Jihada(Orientation)** Waa jihada bogga oo kala ah mid aan jiifin Portrait; ama mid jiifta Landscape
6	**A4** Xajmiga warqadda, asal ahaan waxaa dooran A4

Si aad u daabacdo:

1. Tag qaybta daabacaadda.
2. Haddii aad rabto in aad daabacato boggaga qaarkood, waxaad qori kartaa bogag kala duwan. Haddii kale, xulo dhamaan bogagga.
3. Xulo tirada nuqulada.
4. Guji botonka daabac "**print**".

Daabacaadda Habka "Quick Print"

1. Guji fallaarta hoos u jeedda ee ku taal dhinaca midig ee "**Quick Access**"
2. Dooro "Quick print" haddii aadan horey u doora



b) **Sadarka iyo Faqradaha (Line Paragraphing and Spacing)**

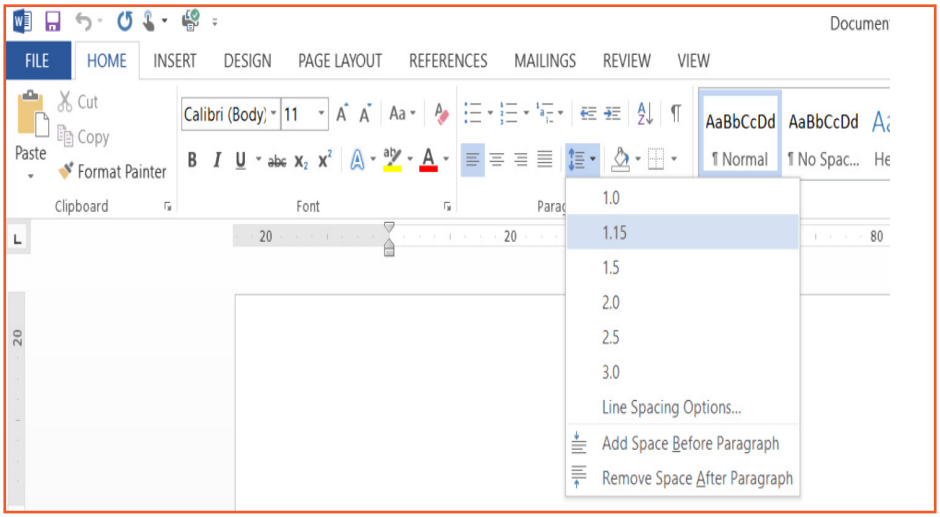
Si aad u sameyso qoraal bilic iyo nidaam leh waxaad u baahan tahay in aad habayso fogaanta u dhexeysa sadarrada iyo faqradaha dhexdooda.

Fogaan-dhaafka sadarka "Line Spacing"

Fogaanta u dhexeysa sadarrada waxa ay fududeysaa akhrinta dokumentiga. Waxa aad badin kartaa fogaanta u dhexeysa sadarrada si uu si fiican ugu muuqdo qoraalku ama fogaanta waa yaren kartaa si aad qoraalka bogga u la ekeysiiso.

Si aad u qaabisid fogaanta u dhexeysa sadarrada:

1. Dooro qoraalka aad rabto inaad qaabeyso.
2. Guji amarka "**Line and Paragraph Spacing**" oo ku jira kooxda "**Paragraph**" ee carrabka "Home".
3. Ka xulo tirada aad rabtid in aad u dhexeysiiso sadarrada.



4. Waxaa dooran kartaa "**Line Spacing Options**" si aad u furto farriin-sida "Paragraph", kadib fogaanta u dhexeysa sadarrada ayaa habeyn kartaa.

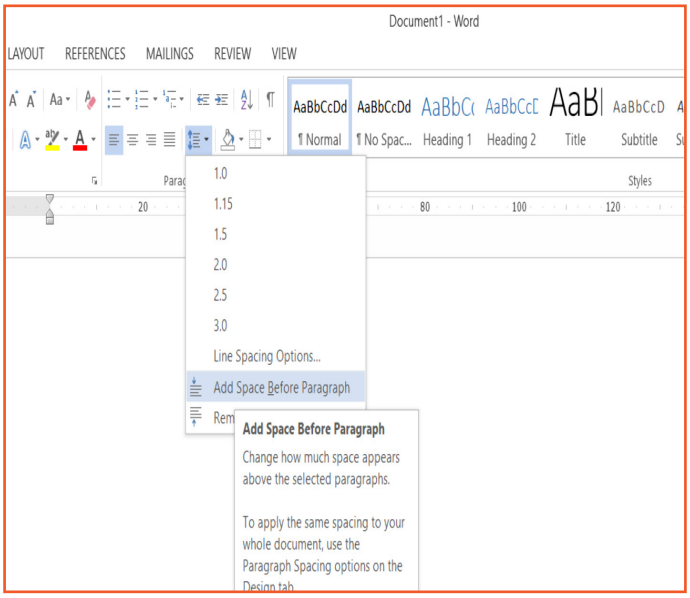
F.G: Haddii aad xulato "**At Least**" ama "**Exactly**" fogaanta waxaa lagu cabbirayaa **dhibco**, haddii kalana **sadarro**.

c) **Fogaan-dhaafka Faqradaha (Paragraph spacing)**

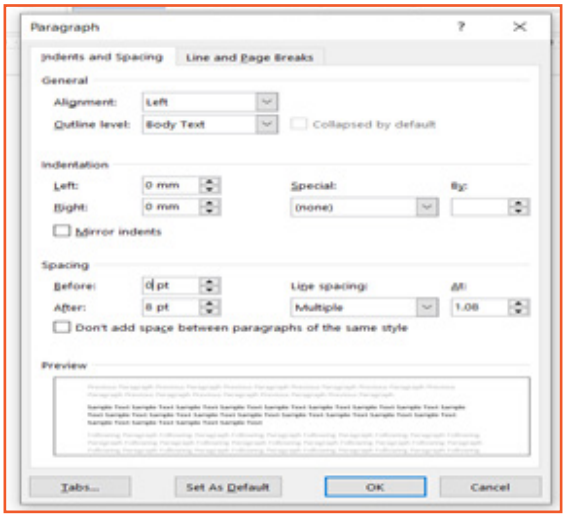
Sidii aad u habaysay fogaanta u dhexeysa sadarrada oo kale ayaa loo habeeyaa fogaanta loo dhaxeysiiyo faqaradaha, cinwaannada iyo cinwaan-hoosaadyada waxa ay fududeysaa akhrinta qoraalkaada.

Si aad u habayso fogaanta faqradaha

2. Guji amarka "**Line and Paragraph Spacing**" oo ku yaal carrabka "**Home**"
3. Dooro fallaarta hoos u jeedda "**Add Space beforeParagraph**" ama "**Remove Space after Paragraph**".



4. Falaarta hoos u jeedda ka dooro "**Line Spacing Options**" Halkaan ayaad ka xukumi kartaa fogaanta ka sarreysa ama ka hooseysa faqradda.



Waxqabadka 1aad:

Daabac bogagga 3 ilaa 8 ee fayl ka kooban dhowr bog

Waxqabadka 2aad:

Daabac warqad si jiifta ah iyo si joog ah

Gunaanad

Cutubkaan waxaanaan ku soo bartay

1. Microsoft Word 2013 waa barnaamij qoraal oo fududeey diyaarinta dokumentiyo kala duwan.
2. "Ribbon" waa meesha laga helo dhammaan amarrada muhiimka ah ee loo baahan yahay.
3. Carrabyada "Ribbon"-ka waxaa ka mid: Home, Insert, Page layout, References, Mailing, Review and View.
4. Muuqaalka "Backstage" waxaa laga heli karaa keydinta (Save), Furidda ("Open"), daabacidda (print).
5. Mastaraddu waxa ay taallaa dhinaca kore iyo bidixda dokumentiga.
6. Keydinta dokumentiga waxa ay kaa caawinaysaa in uusan baabi'in dokumentigaaga haddii kombiyuutarku darro ama korontadaba baxdo.
7. **"Save As"** waa nooc gaar ah oo kaydin ah.
8. Waxaad dokumentigaaga la wadaagi kartaa qof kasta oo isticmaalaya Word 2013 ama 2007.

Daabicida dokumentiga iyo faqreyntooda.

Layli

1. Waa maxay muuqaalka “Backstage”?
2. Qor magacyada kooxaha hoos yimaada carrabka “Home”
3. Waa maxay faa’iidada mastaradda?
4. Cilmi baari: qor magacyada xirmooyinka uu soo maray MS – word 2013
5. Abuur fayl cusub kuna qor qoraal ilaa 10 sada ah oo aad ugu hadleyso dugsiga aad baraha aad ka tahay
6. Beddel cabbirka farta (font size): 16
7. Ka dhig mid qaro leh(Bold); mid jiifta(italic) ama mid hoosta ka xariiqan (underline)
8. Beddel hurdi midabka farta qoraalka.
9. Beddel jihada bogga. (Portrait ama Landscape).
10. Qaar ka mid qoraallada ka dhig kuwo dhibco leh ama lambareysan.
11. Ku dar dokumentiga qoraal taxan oo lambareysan.
12. Fur dokumenti hore u jiray, Fiiri muuqaalka dokumentiga (Printi Preview) ka ho inta aadan daabicin.
13. Daabac laba koobi oo ka mid ah dokumentiga.
14. Fur dokumenti hore u jiray, Ka beddel fogaanta u dhexeysa sadarrada. Beddel fogaanta u dhexeysa cinwaanka iyo faqradda 1aad.

Qiimaynta Cutubka:

1. Muxuu Muuqaalka Word 2013 uga duwan yahay muuqaalada xirmooyinka ka horreeyay?
2. Sheeg waa maxay erayga dokumenti?
3. Abuur Dokumenti cusub
4. Fur dokumenti hore loo kaydiyay
5. Raadi eray ku jira document oo ku badel eray kale
6. Ka dooro jumlad ku jirta fayl, ka baddel xajmiga, magaca farta iyo midabka farta
7. Dooro qoraal ku jira kombiyuutarka, isticmaal kaydin nooc gaar ag oo ku kaydi faylka meel aan ahayn meeshii uu yaallay, ka baddel nooca faylka
8. Dooro qoraal ku jira kombiyuutarka, ka baddel fogaandhaafka faqradaha
9. U Daabac fayl arna si jiif ah marna si jog ah

Cutubka 7aad: Barashada Barnamijka PowerPoint 2013

Hordhac:

Cutubkaan 6aad waxaad ku baran doontaa aasaasiyada barnaamijka Microsoft PowerPoint 2013. Kaasoo loo adeegsado soo bandhigista macluumaad, gudbinta casharo iwm qaab kooban oo leh dhibco.

Ujeedooyinka Cutubka

Dhammaadka cutubka bare-ardaydu waxa ay awood u yeelanayaan in ay:

1. Qeexaan barnaamijka MS PowerPoint 2013.
2. Geliyaan slide-ka qoraal, ku daraan slide cusub, dalban karaan naqshadaha kal duwan ee barnaamijka PowerPoint.
3. Barbardhig ku sameeyaan muuqaalada barnaamijka MS PowerPoint
4. Daabici karaan slides-ka.
5. Habayn karaan qoraalka, beddeli karaan qoraalka farshaxanka casriga ah (SmartArt).
6. Gelin karaan, wax ka beddeli karaan, tafatiri karaan, koobiyeey karaan qaababka (shapes).
7. Ku dari karaan cinwaan koraad (header) iyo ciwaan hoosaad (footer).
8. Fayl MS – Word 2013 u beddeli karaan barnaamijka PowerPoint 2013.
9. Soo galin karaan, qaabayn karaan sawiro, sanduuqa qoraalka, shax (chart) iyo jadwal (table).
10. Adeegsan karaan oo badali karaan muuqaalka guud ee slide-ka
11. Qorshayn karaan Is-beddellada iyo xilliga isbadellada ee Slide-yada
12. Qiimeyn karaan bandhiga (Presentation).

Tusmada Cutubka

Cutubkaan waxaanuu ka kooban yahay afar cashar oo kala ah:

Casharka 1aad: Abuuritaanka Bandhigga (Presentation) ee PowerPoint 2013.

Casharka 2aad: Wax ka beddelka bandhigga.

Casharka 3aad: Gelinta waxyaabo dheeraad ah bandhiga (Presentation).

Casharka 4aad: Gabagabaynta bandhiga (presentation).

Habka Waxbaridda

1. **Sharaxaad (Fasiraad Macallin)**
    - Macallinku wuxuu sharaxayaa:
        - Waa maxay PowerPoint?
        - Ujeeddada loo adeegsado (tusaale ahaan: soo bandhigidda mashruuc, warbixin, tababar iwm)
        - Farqiga u dhexeeya PowerPoint 2013 iyo noocyada kale
2. **Practical PowerPoint 2021 (Gacan-ku-samayn - Baraktikal)** *(In kasta oo la barayo PowerPoint 2013, tababarka gacan-ku-samaynta wuxuu adeegsadaa PowerPoint 2021 si loo waafajiyo tiknoolojiyada casriga ah.)*
    - **Bilaabidda barnaamijka PowerPoint**
        - Ardayda waxa la barayaa sida barnaamijka PowerPoint loo furo oo looga shaqeeyo.
    - **Abuuridda dhowr slide**
        - Waxay bartaan sida loo sameeyo dhowr slide oo kala duwan sida title slide, content slide iwm.
    - **Qaabaynta slidka (Slide Design & Layout)**
        - Waxay ku shaqaynayaan:
            - Ku daridda sawirro, garaafyo, iyo qoraallo
            - Doorashada layout-ka saxda ah ee ku habboon mawduuca
    - **Beddelidda muuqaalada guud ee slidka (Themes & Backgrounds)**
        - Ardaydu waxay dooranayaan theme-ka slidkooda, waxayna ku daraan midabyo ama sawir background ahaan.
    - **Adeegsiga amarada Slide Show**
        - Waxay bartaan sida loo bilaabo Slide Show, sida loo muujiyo bandhig.
    - **Maamulka is-beddeleyaasha iyo waqtiga slidka (Transitions & Timings)**
        - Waxay ku shaqaynayaan sida loo dejiyo is-bedbeddelka (transitions) iyo waqtiga slide walba uu qaato marka bandhigga la socdo.

Casharka 1aad: Abuuritaanka Bandhigga (Presentation) ee PowerPoint 2013.

Su'aal: Is barbardhig ku samee Barnaamijka Word 2013 iyo Barnaamijka PowerPoint 2013?

Ujeedooyinka Casharka

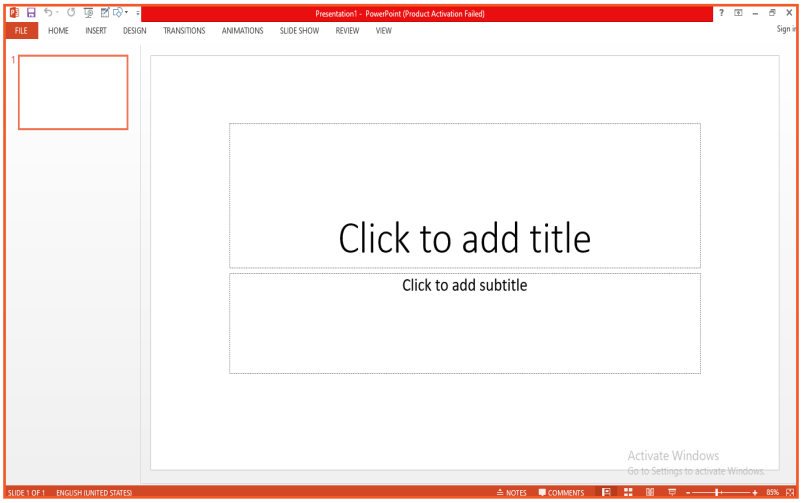
Dhammaadka casharkaan ardaydu waxa ay awood u yeelanayaan in ay:

1. Qeexaan barnaamijka PowerPoint 2013.
2. Geliyaan slidka qoraal.
3. Ku kordhiyaan slide cusub.
4. Dalbadaan naqashadeenta kal duwan ee barnaamijka PowerPoint 2013.
5. Barbardhig ku sameeyaan muuqaalada barnaamijka PowerPoint 2013.
6. Daabici karaan slideska.

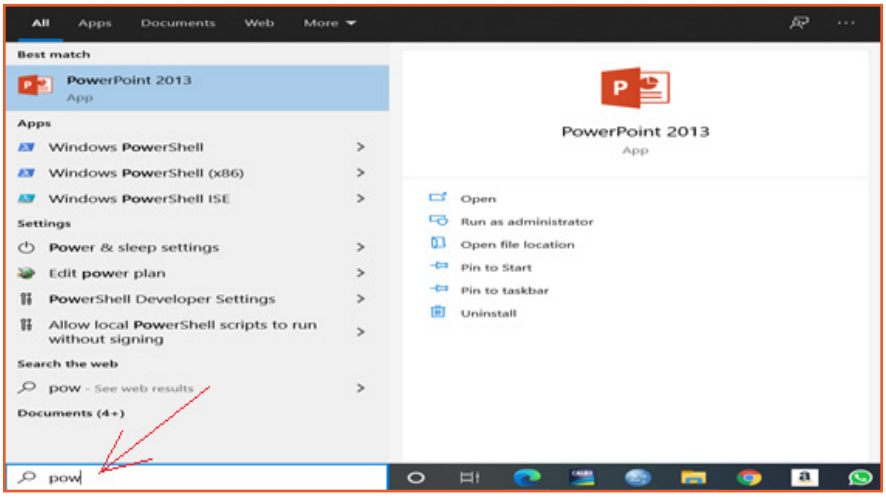
Qeexid: Barnaamijka PowerPoint 2013 waa barnaamij awood kuu siinaya in aad abuurto bandhigyo (presentations) macluumaad kala duwan iyo muuqaalo soo jiidasho leh.

Gelitaanka Qoraalka Slide-ka

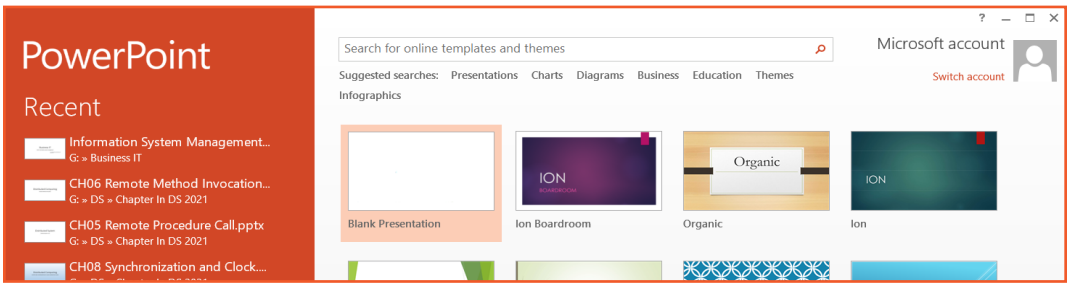
Mar waliba oo aad bilaawdo PowerPoint, bandhiga (presentation) cusub oo leh cinwaan maran oo ka muuqda muuqaalka caadiga ah (Normal View). Cinwaanka slide waxa uu leeyahay labo qoraal oo dhigaal ah (**text placeholder**) – sanduuqyo (boxes) leh xuduudo dhibco ah - halka aad qoraalka ku qoraysid. Meesha ugu sarreysa qoraalka ee cinwaanka slideka waa cinwaanka goobta (**title placeholder**), oo lagu calaamadeeyay "**Click to add title**" Halka ka hooseeysa waxaa lagu calaamadeeyay "**Click to add subtitle**"



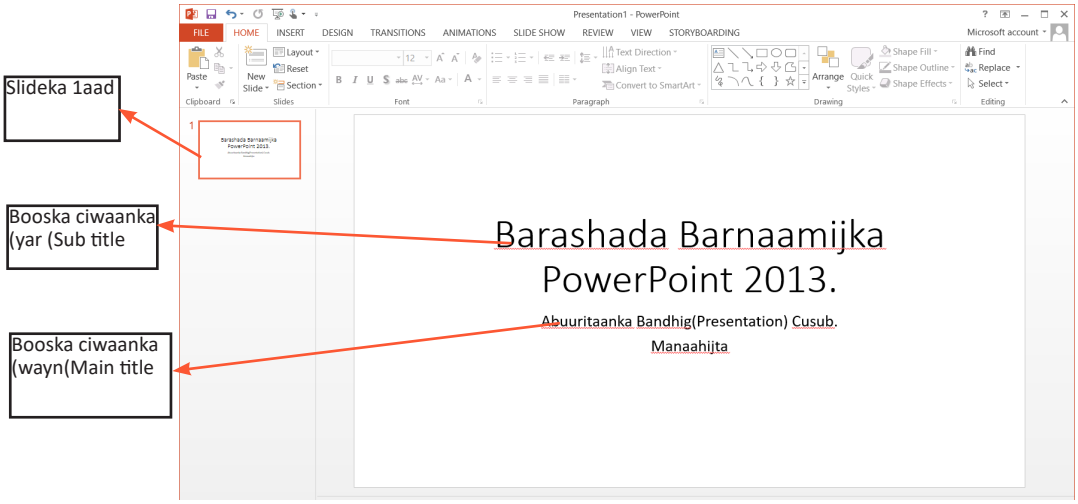
1. Si aad u bilowdo PowerPoint cusub samee tallaabooyinka soo socda:
2. Ku qor qeybta raadin barnaamijka ee Windowka ereyga “PowerPoint”



3. Guji PowerPoint 2013. Si aad u abuurto bandhig (presentation) cusub
4. Guji bandhig banaan “Blank Presentation”



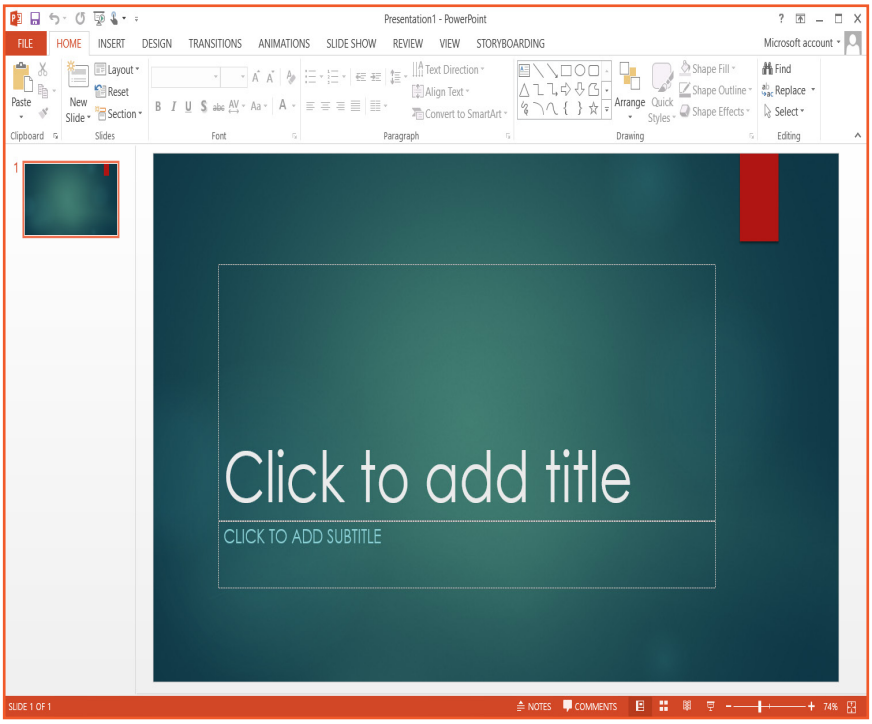
5. Dhanka bidix ee sawirka kore waxaa kaagaa muqanaaya bandhigayaal (Presentations) dhawaanahaan la isticmaalay weliba sida ay u kala horeeyeen, sidoo kale waxaad ku arkeysaa bandhig banaan iyo kuwa naqshadaysan.
6. Guji meesha cinwaanka lagu qoro.
7. Ku qor **Barashada Barnaamijka PowerPoint 2013.**
8. Guji qeybta ciwaan hoosaadka (sub title).
9. Ku qor **Abuuritaanka Bandhig (Presentation) Cusub**.
10. Riix furaha ENTER, kadib qor Magacaaga sida **Manaahijta**



Sawirka kore waxaa kaga muuqanaya slide-ka kowaad ee barnaamijka PowerPoint 2013. Waxa uu ka duwan yahay slideyada kale, waayo waxa kaliya oo lagu qoro waxa ay tahay ciwaanka weyn (main title),meel lagu qoro ciwaanka yar (sub title) iyo meel lagu magaca qofka jeedinayo bandhiga(presentation).

Waxbadqadka 1aad:

Abuur bandhig (presentation) naqshadaysan ee ka muuqda sawirka hoose adigoo raacaya talaabooyinka ka hooseeya sawirkan



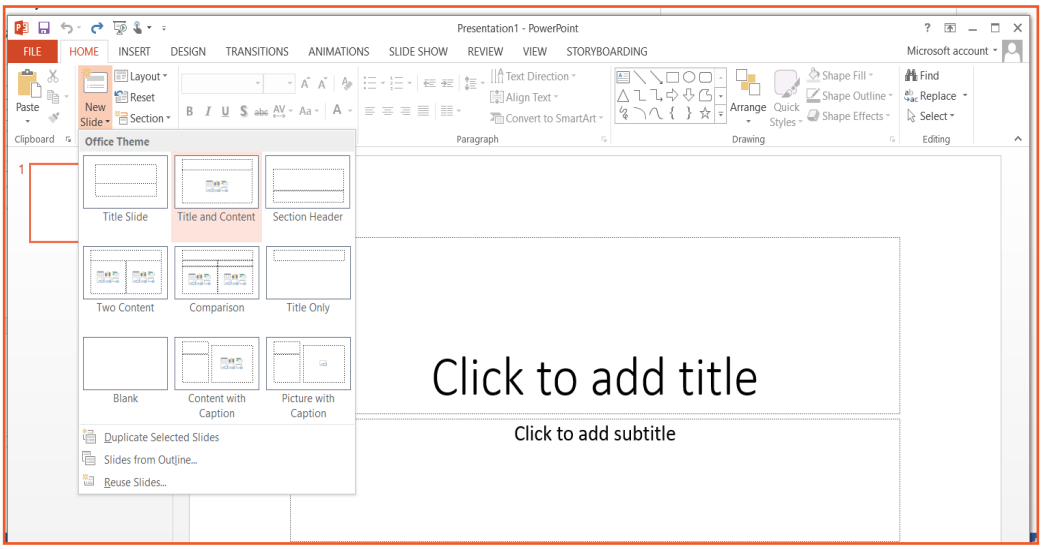
1. Bilaw barnaamijka **PowerPoint 2013**.
2. Dooro mid ka mid ah naqshadaha diyaarsan
3. U samee Cinwaan wayn, cinwaan yar iyo magaca qofka soo jeedinaayo bandhiga (presenation) sida magacaaga.

Ku Darida Slide Cusub

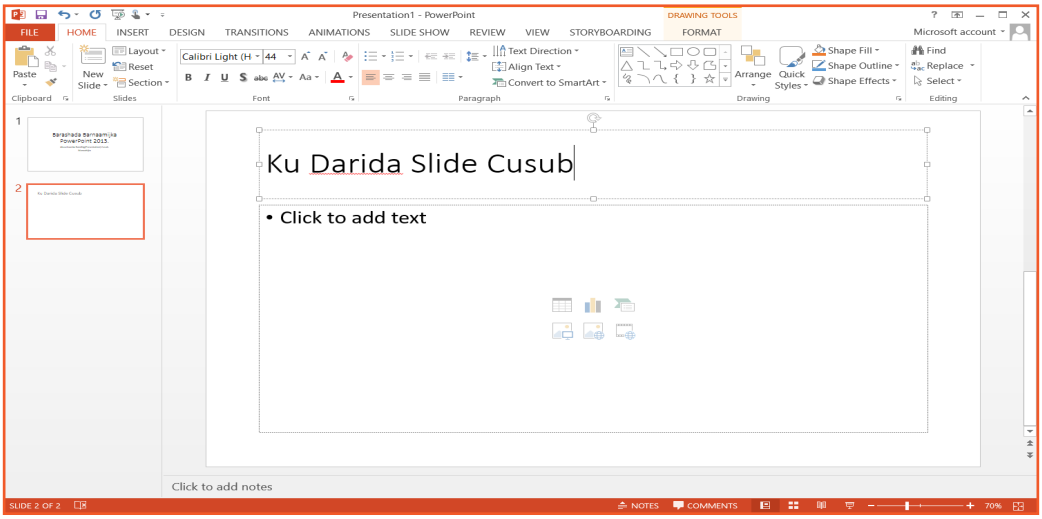
Caadi ahaan, marka aad ku darto slide cusub bandhig (presentation) waxaad haysaa fikrad fiican oo aad doonayso in aad ku darto slideyo cusub. Haddaba si aad ugu darto slide ama slideyo cusub raac talaabooyinka hoose ku xusan.

Talaabooyinka

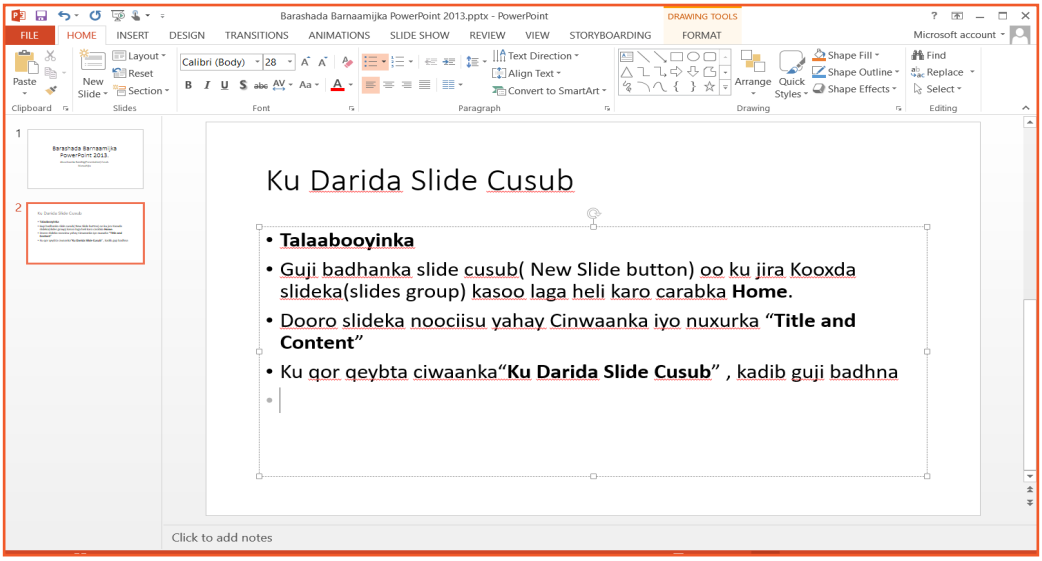
1. Guji badhanka slide cusub (**New Slide**) oo ku jira Kooxda slide-ka (slides group) kasoo laga heli karo carabka **Home**.
2. Dooro slide-ka noociisu yahay Cinwaanka iyo Tusmada "**Title and Content**"



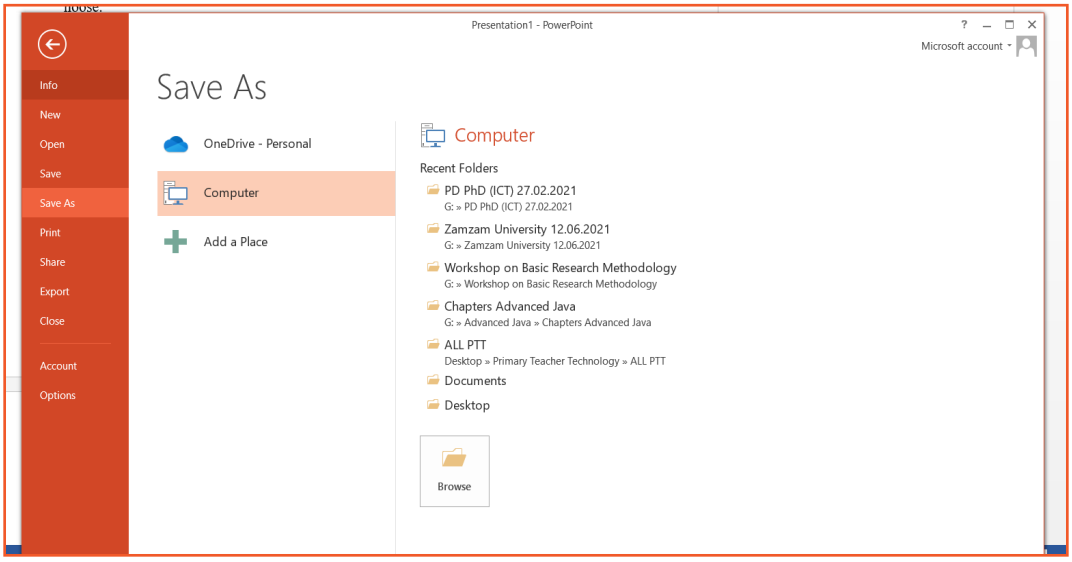
3. Ku qor qeybta ciwaanka"**Ku Darida Slide Cusub**", kadib guji badhanka haynta nuxurka(conent placeholder).



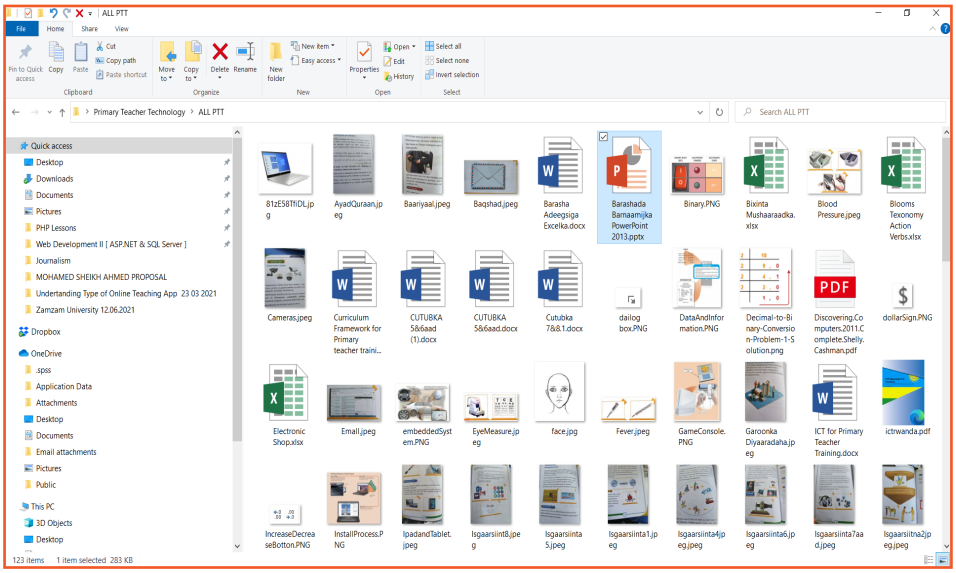
4. Guji qeybta tusmada "**Content**", kadibna qor xogta aad doonaysid sida kaaga muuqata sawirka hoose.



5. Sidaa aad u keydso shaqada aad soo qabatay hal mar riix furayaasha kal **Ctrl + S**. ama Guji meel bannaan ee slide-ka dushiisa, kadib dooro badhanka keydinta (**save buttom**) qeybta kore ee dhanka bidixda. Sida sawirka kaa muuqanayso Guji "Kombiyuur" kadib Guji meeleey faylka (browse).



6. U bixi magaca PowerPoint "**Barashada Barnaamijka PowerPoint 2013.pptx**" sida kuu muuqato.



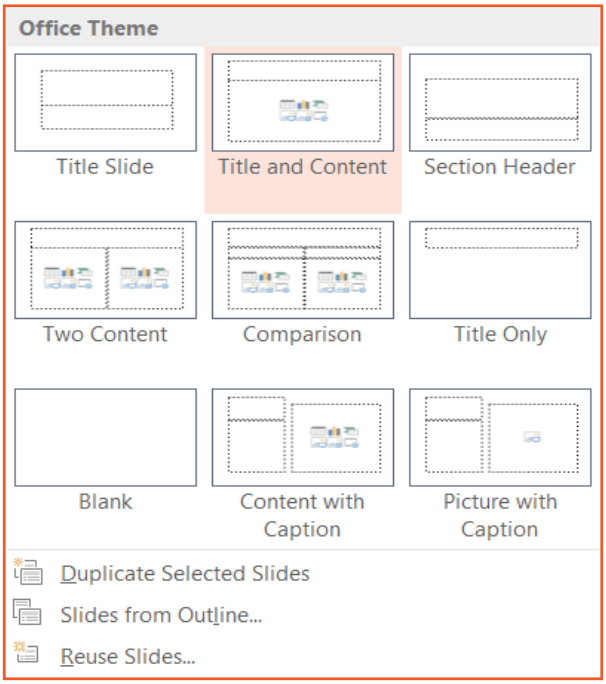
Astaamaha Booska Tusmada (Content placeholder icons)

Jadwalka (table) iyo sawirka ka hooseeya waxa uu soo koobayaa Shan waxyaabood oo aad ka helayso markii aad abuurito slide cusub waxa ayn kala yihiin: Jadwal (table), Shax (Chart), Farshaxanka casriga ah (SmartArt), Sawir laga soo qaadayo fayl, Sawir laga soo qaadayo internetka iyo muqaal yar (video clip).

Guji astaanta	Saad u geliso
	(Jadwal (Table
	(Shax (Chart
	(Farshaxanka Casriga ah (SmartArt
	(Sawir laga soo qaadayo fayl (Picture from a file
	(Sawir laga soo qaadayo internetka (Picture from online
	(Muuqaal yar (Video Clip

Waxqabadka 2aad:

1. Guji badhanka slide cusub (New Slide button) oo ku jira Kooxda slide-ka (slides group), kasoo laga helaayo carabka Home.
2. Kala sheeg waxa ay ku kala duwan yihiin slide-ka sawirka hoose ka muuqda.



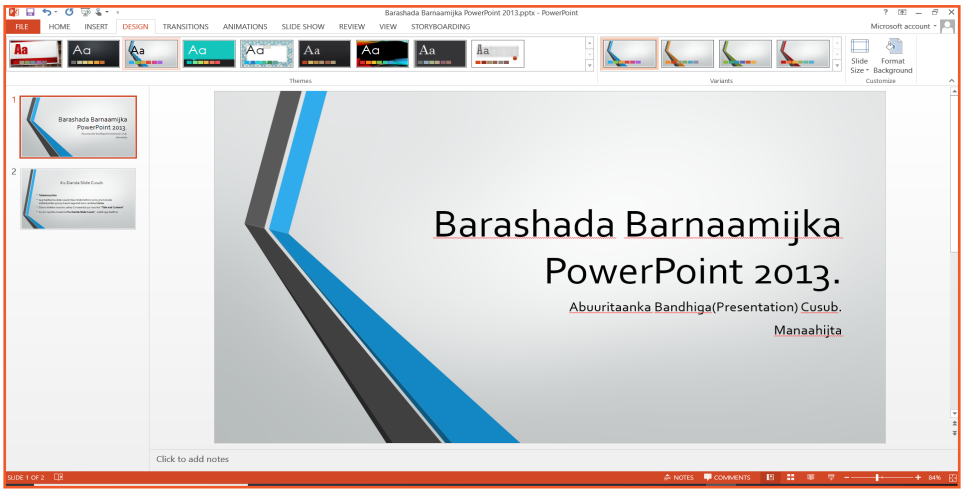
Dalbashada Mawduuca Naqshadeynta

PowerPoint waxaa ka helaysaa tiro muuqaalo naqshadaysan (design theme) taas oo kaa caawinaysa in aad si dhakhsa leh u abuurto bandhig (presention) si xirfadaysan oo casri ah loo sameeyay. Si aan u samayno bandhig (presentation)

soo jiidasho leh raac talaabootinka hoose.

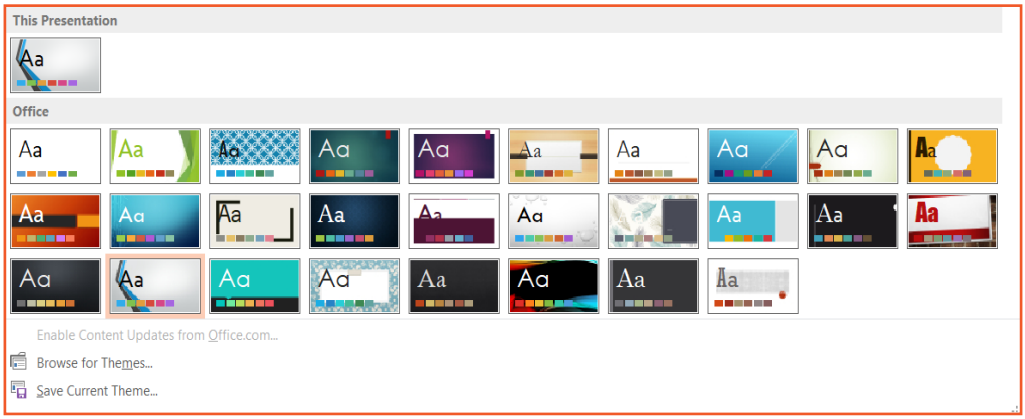
Talaabooyinka:

1. Guji badhanka(Thumbnail Slide 1) ee carabka slides.
2. Guji carabka **Design** ee Ribon, kadib tilmaan **Parallax Theme** ee ka mid ah kooxda themes (**Themes group**) ee ka muuqanaaya sawirka hoose.



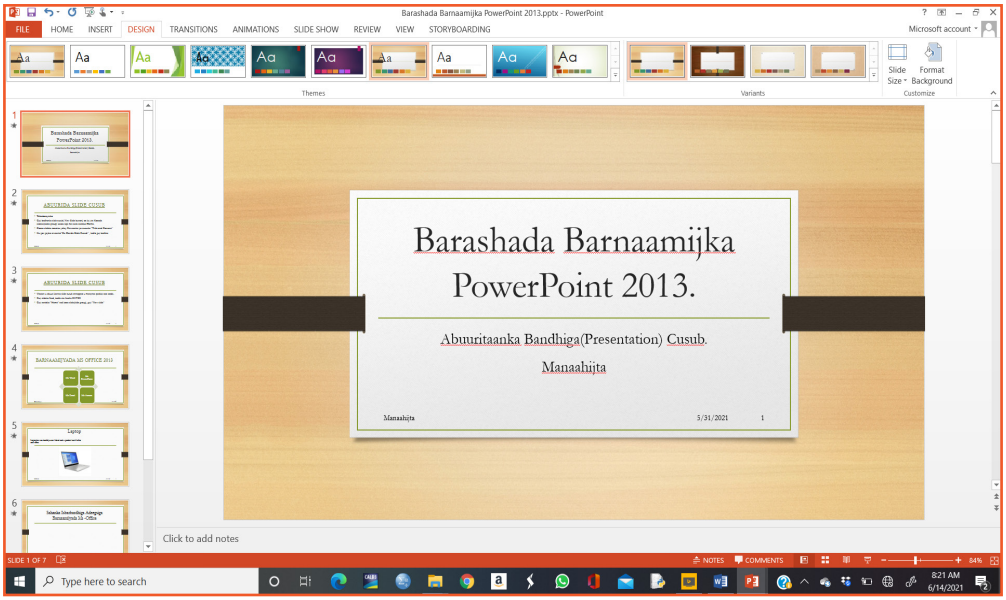
3. Si tartiib ah ugu aadi hagaha mouse-ka naqshadaha, ka dib dooro midka ku qanciya.
4. Guji badhanka more (more button) si aad u hesho naqshado dheeraad ah.

Sawirka hoose waxaa kaaga muuqanayaa naqshado kala duwan ee barnaamijka PowerPoint 2013.



Waxqabadka 3aad:

Si aad u badesho naqshadda slideka, oo aad u hesho sawirkan hoose oo kale. Raac talaaboyinka hoos ku xusan.



1. Fur faylka magaciisu yahay "Barashada Barnaamijka PowerPoint 2013.pptx" ee kuu yaalla cajaladda (drive) ama gal ku jira kombiyuutarka.
2. Guji carabka **Design**
3. Dooro naqshad, kadibna badel midibka naqshada aad dooratay.

Isbarbardhiga Muuqaallada Bandhigga (Presentations)

1. Barnaamijka PowerPoint waxa uu leeyahay shan muuqaal oo asaasi ah: Muuqaalka Caadi ah (**Normal View**)
2. Muuqaalka Sorter (**Slide Sorter View**)
3. Muuqaalka Qoraalka (**Note Page View**)
4. Muuqaalka Muujinta Slide (**Slide show**) iyo
5. Muuqaalka akhriska (**Reading View**).

Muuqaal walba wuu ka duwan yahay midka kale waxa aana loo adeegsadaa ujeedooyin kala duwan.

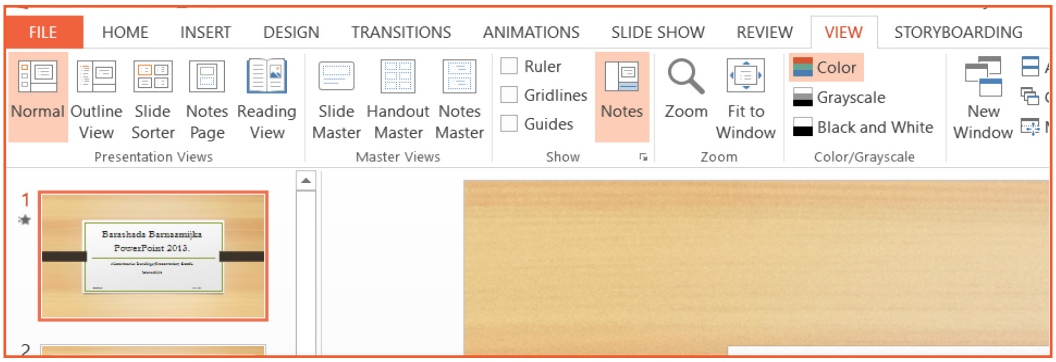
Jadwalka (**Table**) hoose waxaa ka muuqanaaya, magacyada, badhanada iyo sharaxaad kooban muuqalada kal duwan ee barnaamijka PowerPoint 2013.

Magaca badhan	**Badhanka**	**Sharaxaad**
Muuqaalka Caadiga ah (Normal View)		Waxa uu soo bandhigaya labo muuqaal oo kal ah: Outline iyo Slide
Muuqaalka Sorter (Slide Sorter View).		Waxa uu soo bandhigaa dhammaan slides-ka; waxaad u adeegsan karnaa dib u habaynta slides-ka.
Muuqaalka Qoraalka (Note Page View).		Waxa uu soo bandhigayaa sawirka slide-ka ku jira qaab aad u yar, waxa uu kuu suurtagalinaayaa in aad qoraal ku qorto sanduuqa weyn ama aad aragto qoraalka ku jira.
Muuqaalka Muujinta Slide(Slide Show View)		Waxa uu ku soo bandhigaayaa qoraalka slide-ka shaashada kombiyuutarka oo dhan. Taasoo ay wada arki karaan dhammaan ardeyda.
Muuqaalka akhriska (Reading View)		Waxa uu soo bandhigaa qoraalka slide-ka qaab shaashadda kombiyuurtarka buuxin kara.

Si aad u kala xulato muuqaalada kal duwan ee PowerPoint raac talaabooyinka hoos ku xusan:

Talaaboyinka

1. Fur faylka magaciisu yahay "**Barashada Barnaamijka PowerPoint 2013.pptx**" oo kuu yaala cajadala (drive) ama galka ka mid ah kombiyuutarka.
2. Guji carabka View



3. Dooro muuqaalka aad doonaysid. Midka hadda kuu saaran waa muqaalka caadiga ah (Normal View).
4. Guji carabka muuji slideka (Slide show), si aad ula wadaagto dad badan.
5. Dooro amarrada kala duwan ee Slide show sida:
   a. Bilawga (from beginning)
   b. Slide-ka kuu dooran (from current slide).
   c. Ku soo bandhig qaab fogaan arag (Present online).

Waxqabadka 4aad:

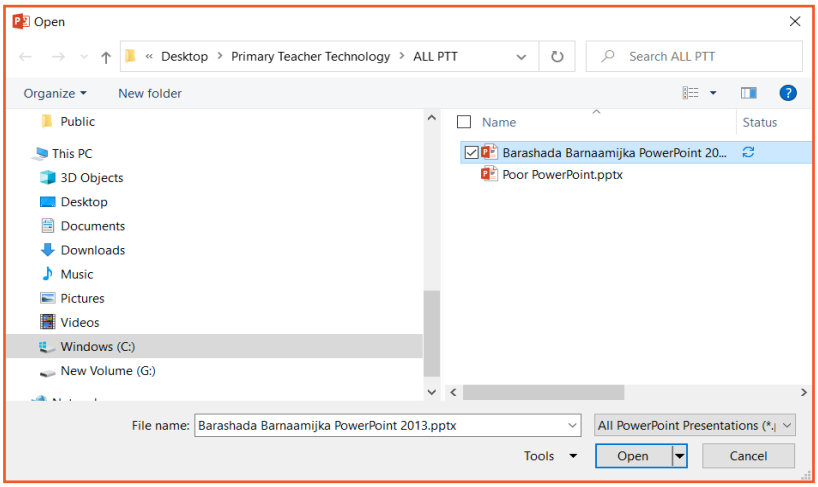
Cilmi - baaris: Raadi waxa ay ku kala duwayihiin Muuqaalka Outline iyo Muuqaalka Slide.

Daabacaadda PowerPoint

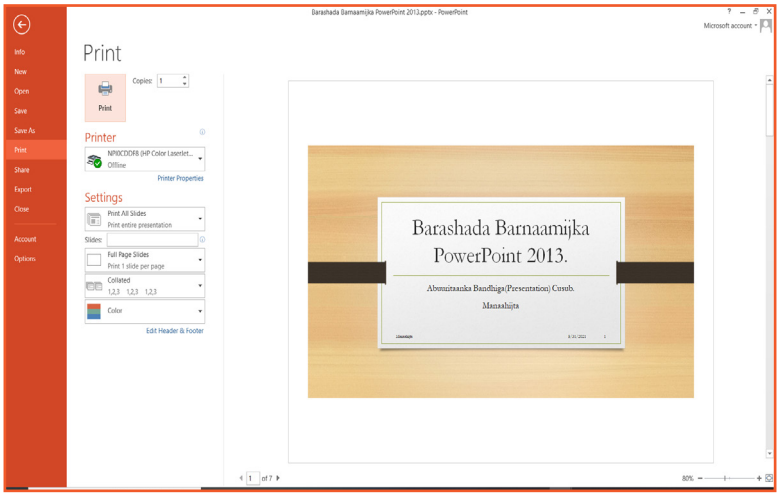
Waxa aad daabaci kartaa qoraalkaaga markaad rabto inaad dib u eegto shaqadaada

ama markaad dhammaysato oo aad rabto inaa hesho nuqul (hard copy). Waxaad samayn kartaa in aad sii aragto qaabka aad u daabacayso slideka ka hor inta aadan daabacin. Samee talaabooyinkaan si aad u daabacdo qoraal PowerPoint.

1. Bilaw barnaamijka PowerPoint 2013. Guji bandhig maran "Blank Presentation"
2. Guji carabka **File** , kadib guji amarka fur(open), ka raadi cajalada(drive) ama galka uu kuugu jiro faylka magaciisu yahay "**Barashada Barnaamijka PowerPoint 2013.pptx**"

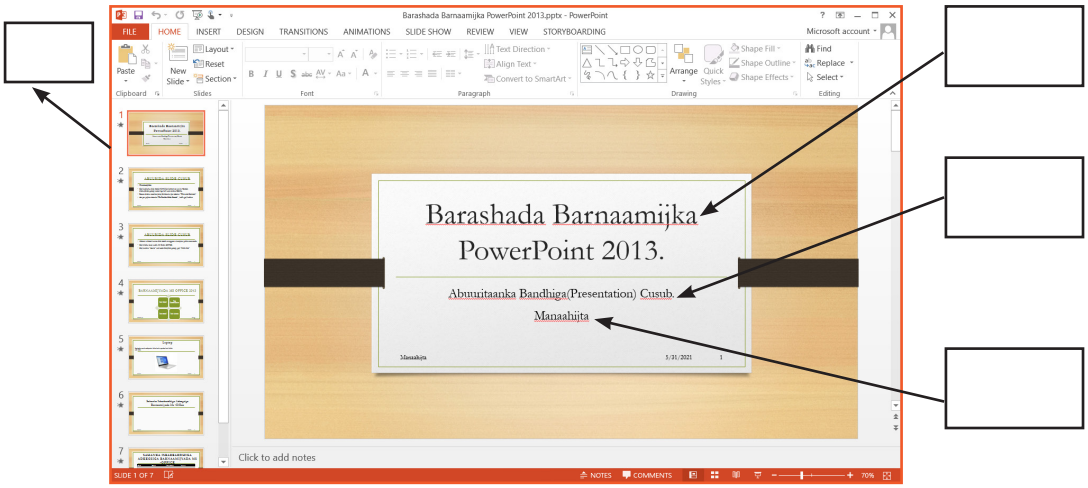


3. Guji carabka **File** ee Ribbonka, kadib guji amarka daabac (**print**).
4. Guji badhanka bogga (Next Page button).
5. Guji badhanka daabacaada (Print button).



Waxqabadka 5aad:

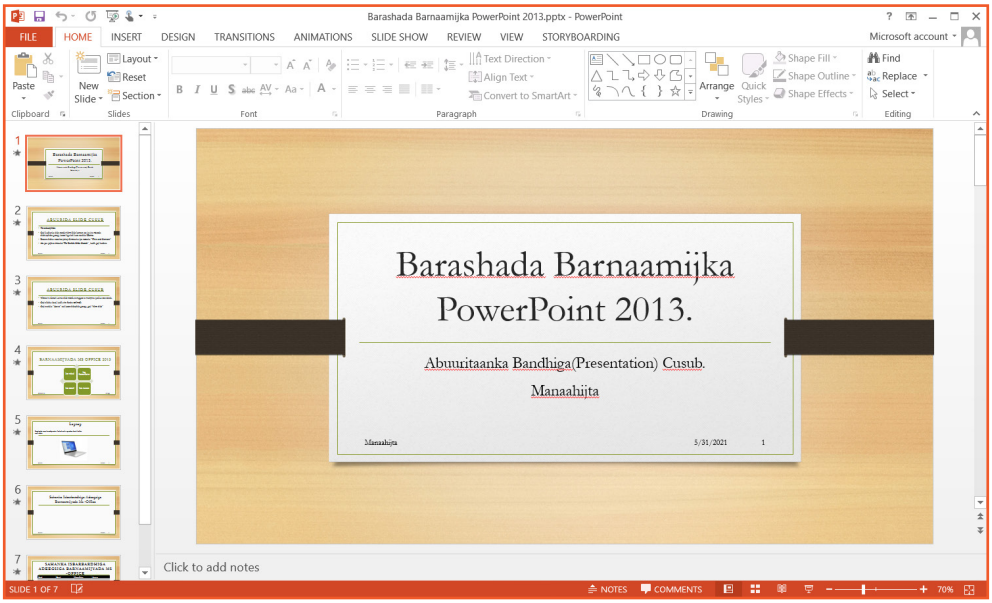
Magacaw qeybaha fallaartu tilmaamayso adigoo ku qoraya magaca sanduuqa, sida ka muuqata sawirka hoose:



1. Bilaw barnaamijka PowerPoint 2013. Guji bandhig maran "Blank Presentation"
2. Guji carabka **File** , kadib guji amarka fur(open), ka raadi cajalada(drive) ama galka uu kuugu jiro faylka magaciisu yahay "**Barashada Barnaamijka PowerPoint 2013.pptx**"
3. Sheeg waxyaabaha ka muuqanaaya aasaasiyaadka barnaamjka PowerPoint 2013.
4. Isku day in aad sharraxdo ujeeddooyinka iyo howlaha ay qabtaan qaar ka mid ah waxyaabaha kaaga muuqanaya shaashadda (Window) ee barnaamijka PowerPoint 2013.

Waxqabadka 6aad:

Waa lagaa doonayaa Bare-arday in aad abuurtid slide cusub, ciwaan dooro, slide kale ku dar kadib qoraal ku qor sida sawirka hoose kaaga muuqda kadib raac talaabooyinka ka hooseeya sawirkan si aad u qabatid hawshaas.



1. Bilaaw barnaamijka PowerPoint 2013. Guji bandhig maran "Blank Presentation"
2. Abuur slide cusub
3. Ku qor qoraal
4. Abuur slide kale oo cusub
5. Ku qor qoraal
6. Guji carabka Design
7. Guji Naqshadaha, kadib ka dooro naqshad sida midka sawirka sare ka muuqda.
8. Guji carabka slide show, si aad dad badan aad ula wadaagto.
9. Keydi hawsha aad qabatay adigoo magac u sameeynaya bandhiga (presenation).

Casharka 2aad: Wax ka beddelka bandhigga.

Su'aal: Slide-yadu ma loo baahan yahay inay noqdaan kuwa soo jiidasho badan, sababee jawaabtaada

Ujeedooyinka Casharka

Dhammaadka casharkaan bare-ardaydu waxa ay awood u yeelanayaan in ay:

1. Habeyn karaan qoraalka.
2. U beddeli karaan qoraalka farshaxanka casriga ah (SmartArt).
3. Gelin karaan waxna ka beddeli karaan qaababka (shapes).
4. Ku dari karaan cinwaanka koraad (header) iyo cinwaan hoosaad (footer).
5. Tafatiri (edit) karaan koobiyayn karaan qaababka (shapes).
6. Ku dari karaan slide-ka cinwaan kore (header) iyo cinwaan hoose (footer).

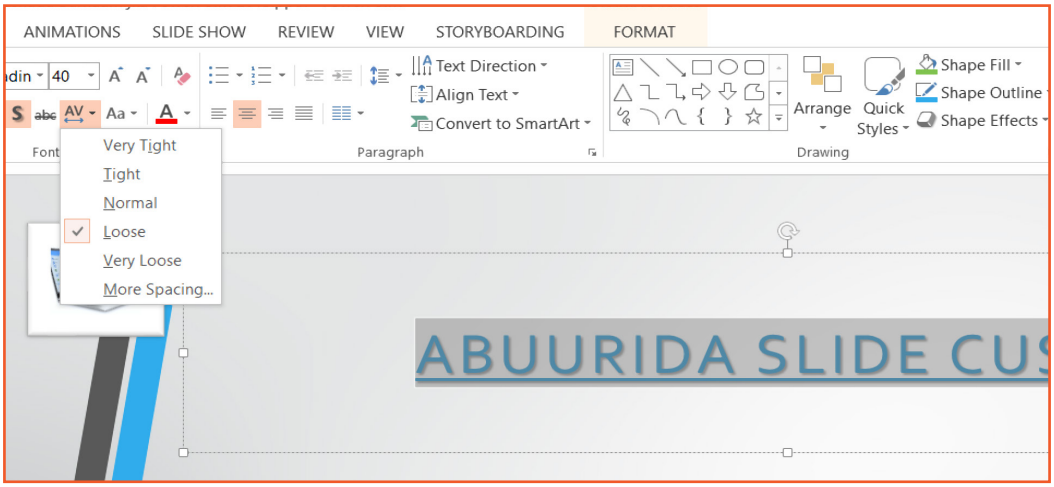
Qaabaynta Qoraalka

Casharkii 1aad waxaad ku soo baratay sida loogu qoro slideka qoraal, ku daridda slide cusub iyo naqshadeynta slideka. Hadda, waxaad diyaar u tahay inaad qaaddo tallaabada xigta ee aad ku abuureyso slide-yo soo jiidasho badan adigoo baranaya qaabaynta qoraalka. Si aad u qaabayso qoraalka samee talaabooyinka soo socda:

Talaabooyinka

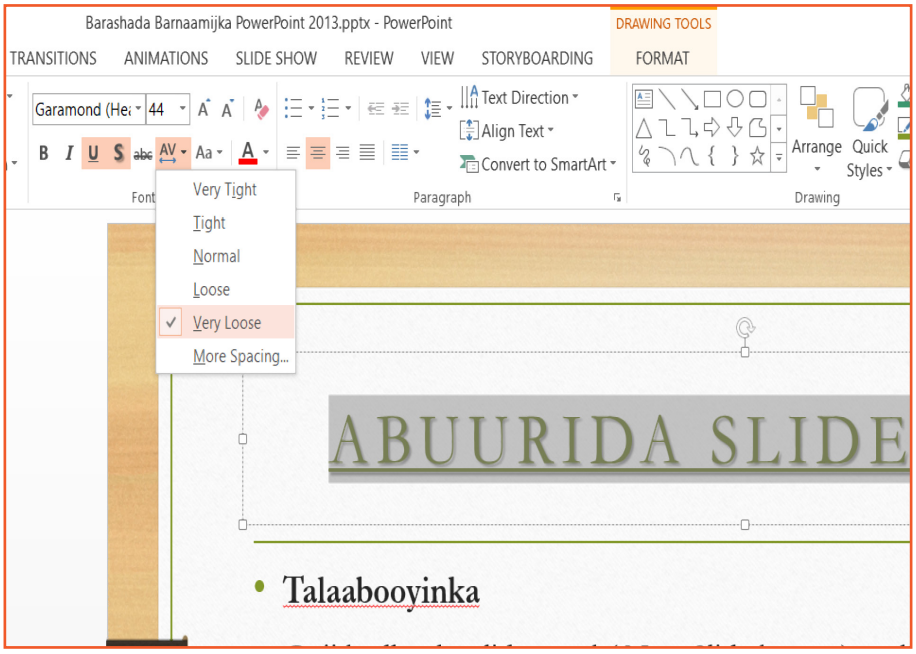
1. Bilaw barnaamijka PowerPoint 2013. Guji bandhig maran "Blank Presentation"
2. Guji carabka **File**, kadib guji amarka fur (open), ka raadi cajalada (drive) ama galka uu kuugu jiro faylka magaciisu yahay "**Barashada Barnaamijka PowerPoint 2013.pptx**"
3. Guji slide 2aad ee carabka slides-ka, kadib labo jeer guji ereyga "Abuuridda" ee qoraalka ku jira.
4. Dul - saar hagaha (mouseka), guji falaarta midabka farta (font color list arrow) kadib dooro midabka aad rabtid. .

5. Guji carabka "Home", kadib dooro falaarta midabka farta (font color list arrow) ee kooxda farta (font group).
6. Guji badhanka kala fogaynta xarfaha (Character Spacing Button) ee ku jira kooxda farta (font group), kadib guji **loose**.
7. Guji meel banaan oo ka mid ah slide-ka, kadib kaydi shaqada.



Waxqabadka 1aad:

Soo Saar muuqaalka sawirka hoose oo kale adigoo raacaya talaabooyinka hoose ku xusan:



1. Muuji (Highlight) qoraalka "Slide Cusub"
2. U baddel far waawayn (UPPERCASE).
3. Kal fogee xarfaha qoraalka adigoo adeegsanaya astaanta ee "loose"
4. Hoos ka xariiq dhamman qoraalka
5. Midabee adiga oo u dooraya midabka "Blue, Accent 1".
6. Guji hooska qoraalka (**Text Shadow**) ee kooxda farta (font group) Sida sawirka hoose.

Beddeli qoraalka farshaxanka casriga ah (SmartArt).

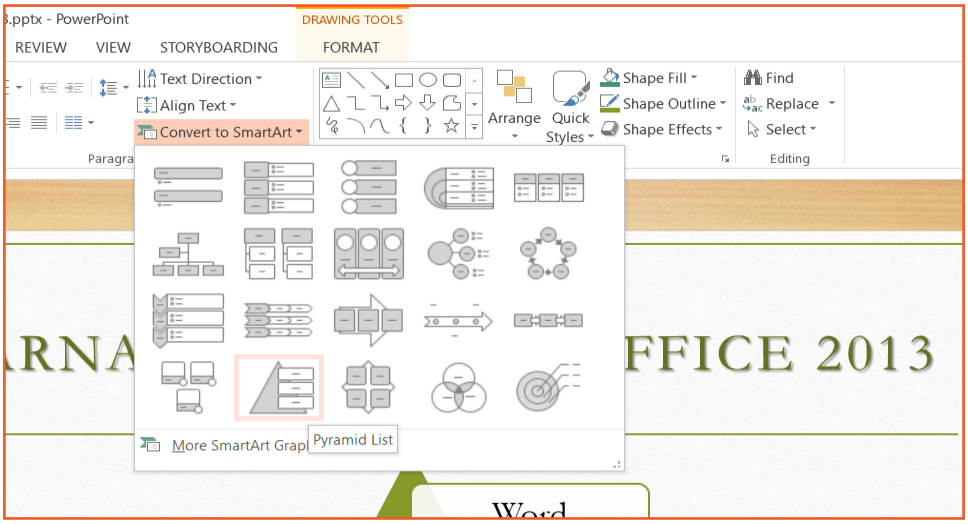
Mararka qaar, markaad la shaqeynayso qoraalka kaliya ma soo jiidaneyso dareenkaaga, iyadoon loo eegin sida aad ugu habaysay midab ama astaamo kale oo qaabeyn ah. Howsha ah in qoraal loo beddelo farshahan casri ah (SmartArt) waxa ay kordhinaysaa in qoraalka uu noqdo mid soo jeedasha leh. Si qoraal aad ugu beddesho farshaxan casri ah (SmartArt), raac talaabooyinka hoos ku xusan:

Talaabooyinka

1. Bilaaw barnaamijka PowerPoint 2013. Guji bandhig maran "Blank Presentation"

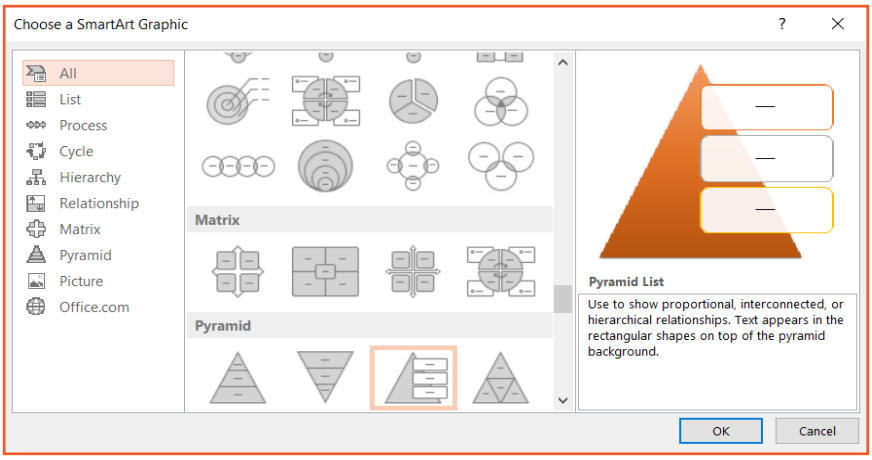
2. Guji carabka **File** , kadib guji amarka fur(open), ka raadi cajalada(drive) ama galka oo kuugu jiro faylka magaciisu yahay "**Barashada Barnaamijka PowerPoint 2013.pptx**"

3. Guji slideka 4aad ee carabka slide-ka, Guji meel ka mid ah shayga qoraalka (text object), kadib guji badhanka u baddel farshaxan casri ah(**Convert to SmartArt Graph Button**).
4. Dhaqaaji tilmaamaha (mouse), dulsaar sawirka farshaxanka casriga ah (SmartArt Graphic Layout).



5. Guji farshaxanka “Pyramid List Layout” ee ku jira qaybta farshaxanka casriga.
6. Guji dhibic walba ee khaanadda qoraalka (text pane).

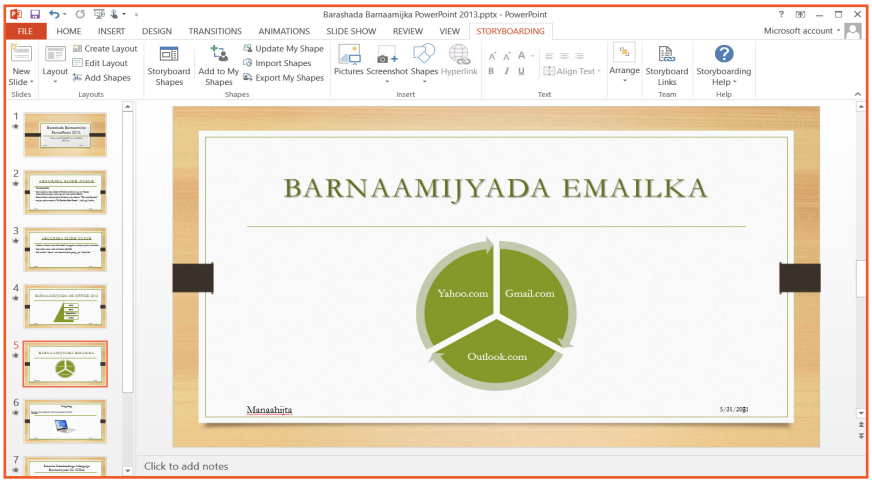
7. Guji badhanka more si aad u doorato noocyada kala duwan ee farshaxanka casriga (SmartArt).



8. Guji meel baanaan oo ka mid ah slide-ka, ka dibna kaydi shaqada adigoo riixaya **Ctrl + S.**

Waxqabadka 2aad:

Soo bandhiga muuqaalka sawirka hoose adigoo raacada talaaboyinka ka hooseeya sawirka.



1. Bilaaw barnaamijka PowerPoint 2013. Guji bandhig maran "Blank Presentation"
2. Guji carabka **File** , kadib guji amarka fur (open), ka raadi cajaladda(drive) ama galka uu kuugu jiro faylka magaciisu yahay "**Barashada Barnaamijka PowerPoint 2013.pptx**"
3. Abuur slide cusub oo 5aad, kadib ku qor qoraal sida kan ku qoran slideka 5aad ee sawirka sare
4. Guji carabka "Home", aad kooxda faqradda [paragraph], kadib guji "Convert to SmartArt".
5. Kaydi hawsha aad qabatay.

Abuuridda Ciwaan kore (Header) iyo Cinwaan hoose (Footer)

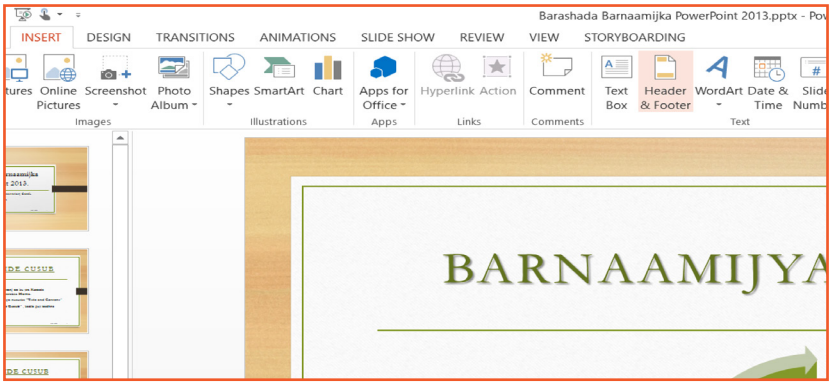
Qoraalka cinwaanka kore (header) iyo cinwaanka hoose (footer) waxa uu noqon karaa magac shirkad, iskuul ama magac alaab. Waxaa kaloo ku soo dari kartaa lambarka slideka iyo taariikhda, waxa ay ku siin karaan muuqaal hufan oo u fududeynaya ardayda inay raacaan bandhiggaaga. Raac tallaaboyinka hoose si aad u abuurto slide leh **Ciwaan kore (Header) iyo Cinwaan hoose (Footer)**

Talaabooyin

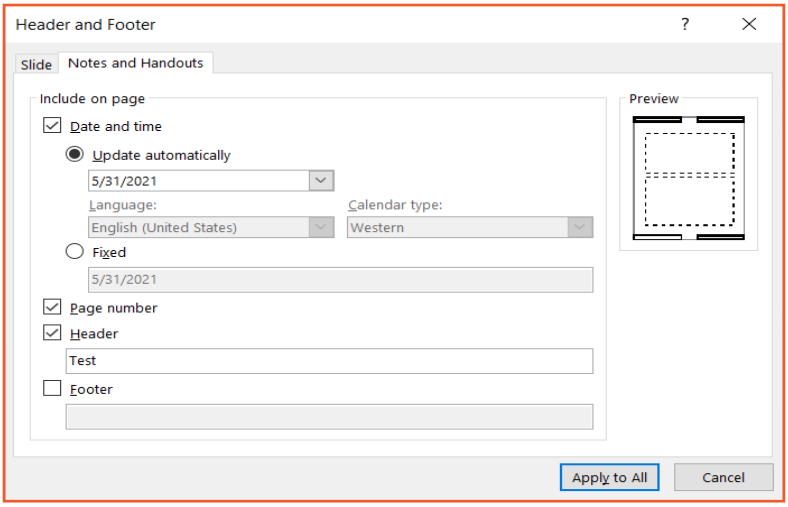
1. Bilaw barnaamijka PowerPoint 2013. Guji bandhig maran "Blank Presentation" Guji carabka **File**, kadib guji amarka fur (open), ka raadi cajalada(drive)

ama galka uu kuugu jiro faylka magaciisu yahay "**Barashada Barnaamijka PowerPoint 2013.pptx**"

2. Guji carabka Insert-ka ee Ribbon, kadibna guji badhanka kore (header) & hoose (footer) ee ka tirsan Kooxda qoraalka (Text group).



3. Guji sanduuqa taariikhda iyo waqtiga si aad u doorato.
4. Guji sanduuqa nambar-ka Slide-ka, Guji sanduuqa ciwaanka hoose (footer), ka dibna ku qor Magacaaga.



5. Guji **Apply to all**

Waxqabadka 3aad:

Cilmi-baaris: sheeg waxa ay ay ku kala duwan yihiin adeegsiga **labada carab oo kal ah Slide iyo Notes and Handouts.** Adigoo fiirinaya sawirka hoose

Ujeedooyinka Casharka

Dhammaadka casharkan bare-ardaydu waxa ay awood u yeelanayaan in ay:

1. U beddeli karaan barnaamijka MS – Word 2013, midka PowerPoint 2013.
2. Soo galin karaan qaabayn karaan sawirro.
3. Soo galin karaan sanduuqa qoraalka.
4. Soo galin karaan jaantuus (chart).
5. Soo galin karaan jadwal (table).

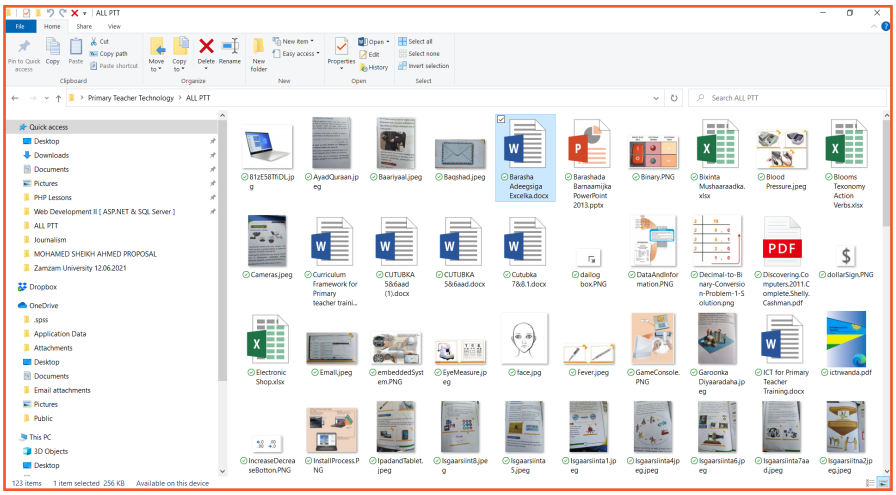
Bandhigayada (Presentations) wanaagsan waxaa lagu daraa waxyaabo badan caawinaya fahamka cidda loo bandhigayo. Waxyaabahaas waxaa ka mid ah muuqaalada (visual), shax (chart), sawir gacmeedyada, iyo sawirrada digitalka.

Soo Gelinta Qoraal

Casharkaan waxa aan ku baran doonnaa sida barnaamijka PowerPoint u aqbalaayo qoraallo ku qoran barnaamijyo kala duwan. Way fududahay in lagu soo bandhigo PowerPoint 2013 dokumentiyada lagu kaydiyay qaabka Microsoft Word (.docx), Qaabka Qoraalka hodanka ah (Rich Text Format) (.rtf), Qaabka Qoraalka fudud (plain text format) (.txt), iyo qaabka qoraalka (HTML format) (.htm). Haddii aad hayso fayl u kaydsan qaabka ah (outline) waad u soo dhoofin (import) kartaa barnaamijka PowerPoint 2013 si aad u abuurto bandhigyo (presentation) cusub ama in aad abuurto slide-yo aad ku darayso bandhig hore u jiray. Raac talaabooyinka hoose ku xusan si aad u qabato howlahaas.

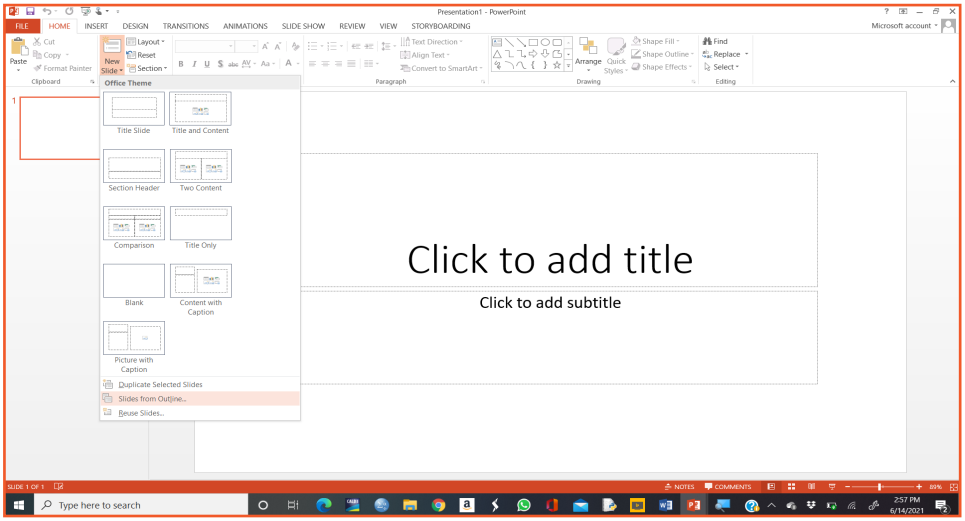
Talaabooyinka

1. Abuur fayl noociisu yahay Ms – Word, sida midka sawirka kaaga muuqanaayo oo ku qouna bixi magaca "**Barashada Adeegsiga Excel.docx**", kuna qor qoraal habaysan.

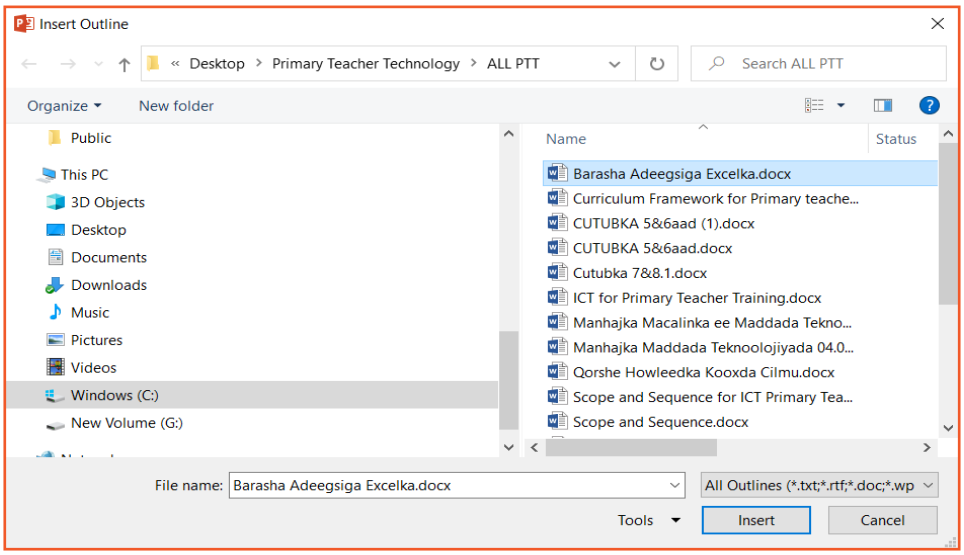


2. Bilaw barnaamijka PowerPoint 2013, Guji Bandhig maran (blank presenation).

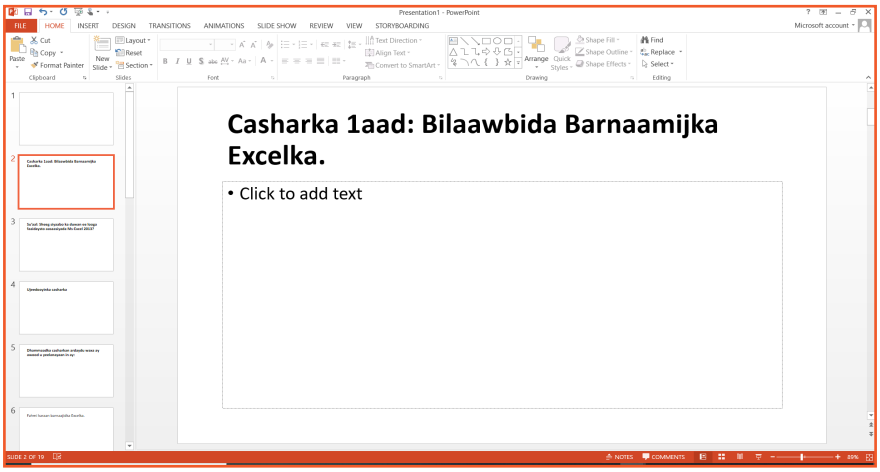
3. Guji Falaarta Liiska Cusub (New Slide last Arrow) ee kooxda slides-ka (slide group) ee carabka Home. kadib guji slides ku jira outline.



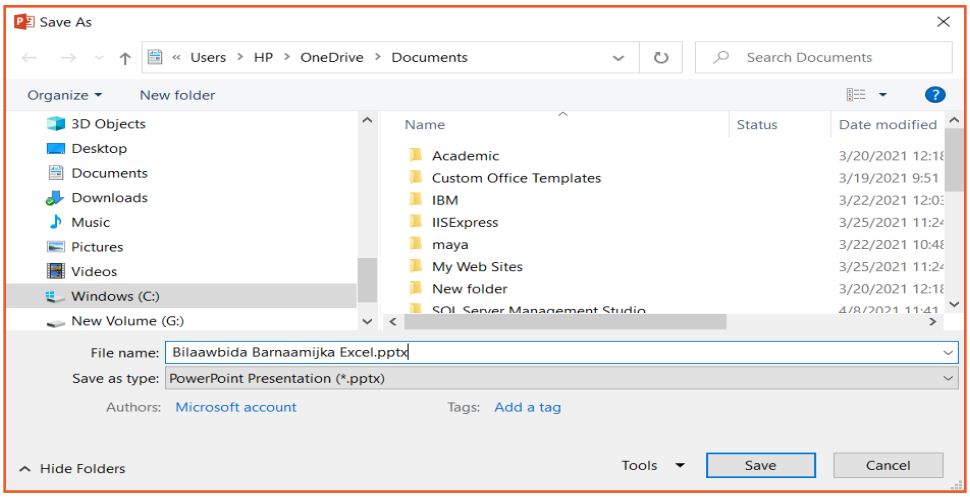
4. U gudub cajalada(drive) ama galka kombiyuutarka halka uu kuu yaallay faylka “Barashada Adeegsiga Excelka.docx” sida sawirka hoose oo kale



5. Guji badhanka gelinta(Insert), hal ilbiris kadib waxaa PowerPoint soo gali doona qoraalkii ku jiray barnaamijkii Word ee ahaa "**Barashada Adeegsiga Excelka.docx**"
6. Maamul Slide-ka sida in aad tirtirto midka aadan doonayn. Sida sawirka hoose ka muuqata.



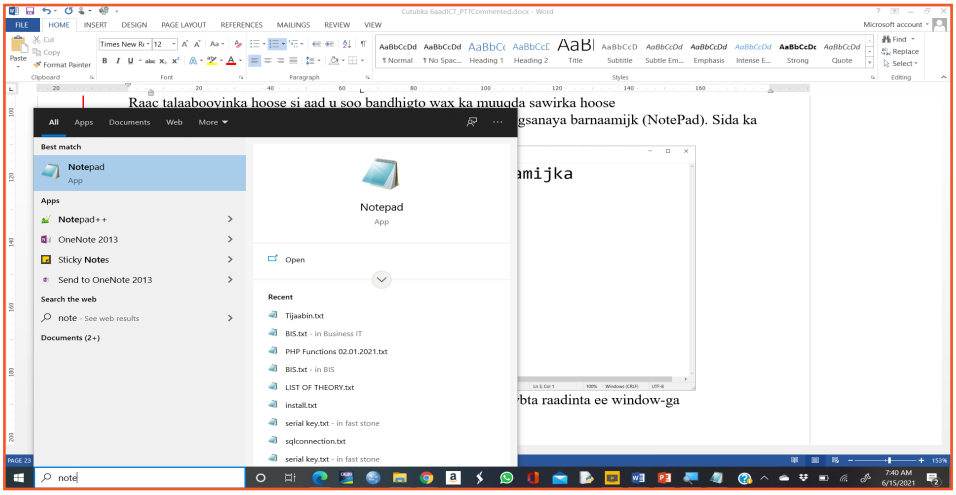
7. Hal mar isla riix labada fure oo kal ah **Ctr + S** si aad u keydiso (Save) faylkii aad usoo rartay qoraalkii Word ka ahaa. Adigoo ku keydinayo magaca ah "**Bilaawbida Barnaamijka Excel.ppt**" Kadib Guji badhanka keydinta (Save). Sida sawirka hoose



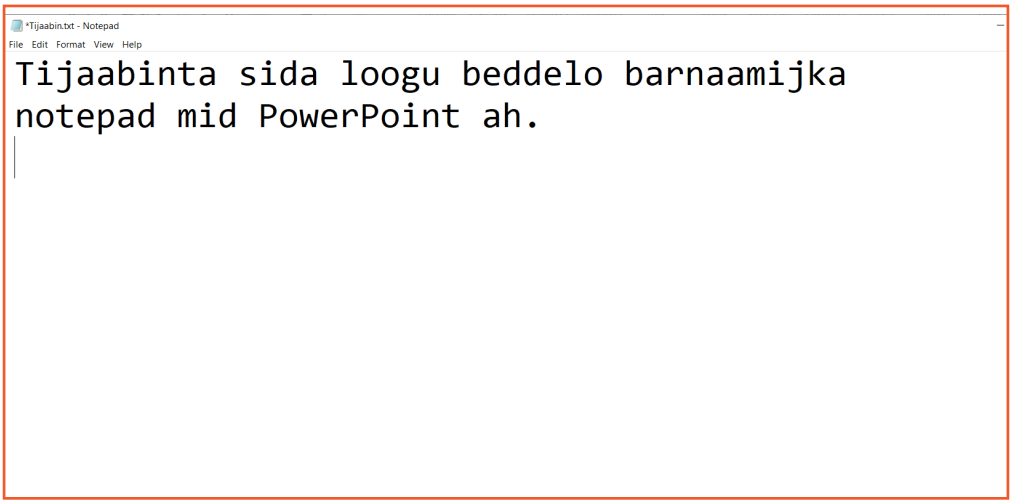
Waxqabadka 1aad:

Raac talaabooyinka hoose si aad barnaamijka Notepad ee Windowka ugu bedesho barnaamijka PowerPoint.

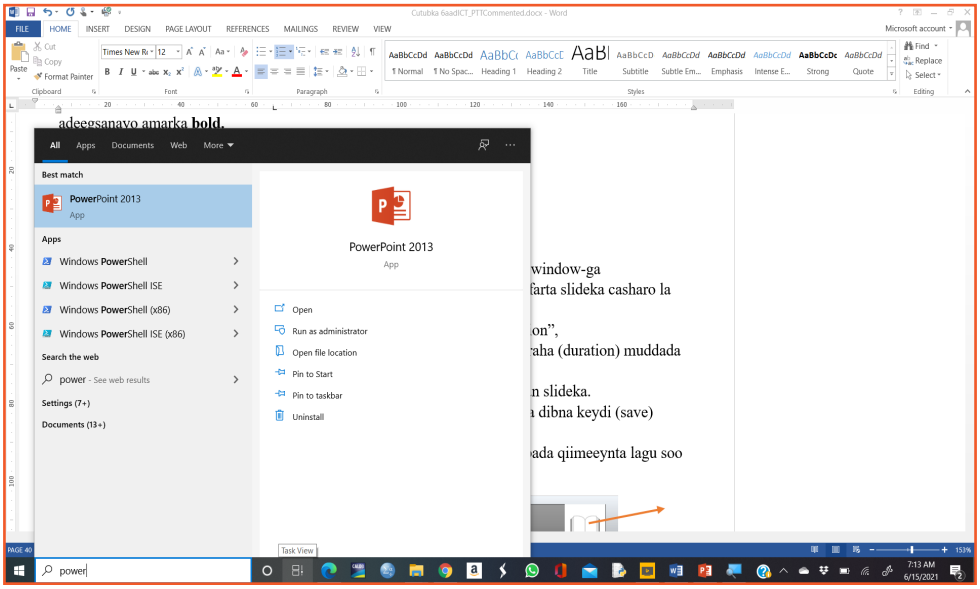
1. Bilaw barnaajimka notepad sida ka muuqata sawirka hoose.



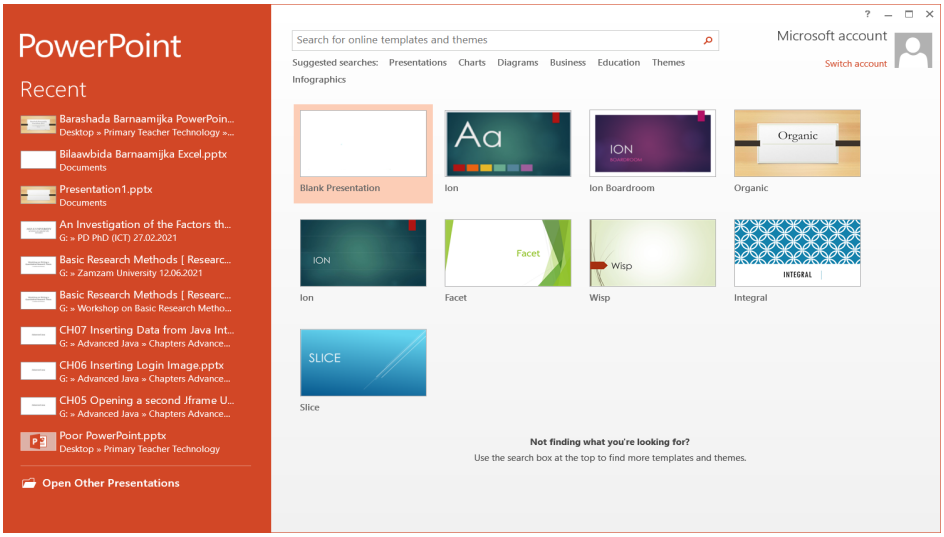
2. Abuur faylka u keydi qaab qoraalka fudud (.txt) adigoo adeegsanaya barnaamijka (NotePad). Sida ka muuqata sawirka hoose.



3. Keydi hawsha aad qabatay, hal mar riix furuyasha **Ctrl + S.**
4. Bilaaw barnaamijka PowerPoint 2013, adigoo ku qoraya qaybta raadinta ee window-ga



5. Guji astaanka PowerPoint-ga waxaa kuu soo muuqanaya sawirka hoose:



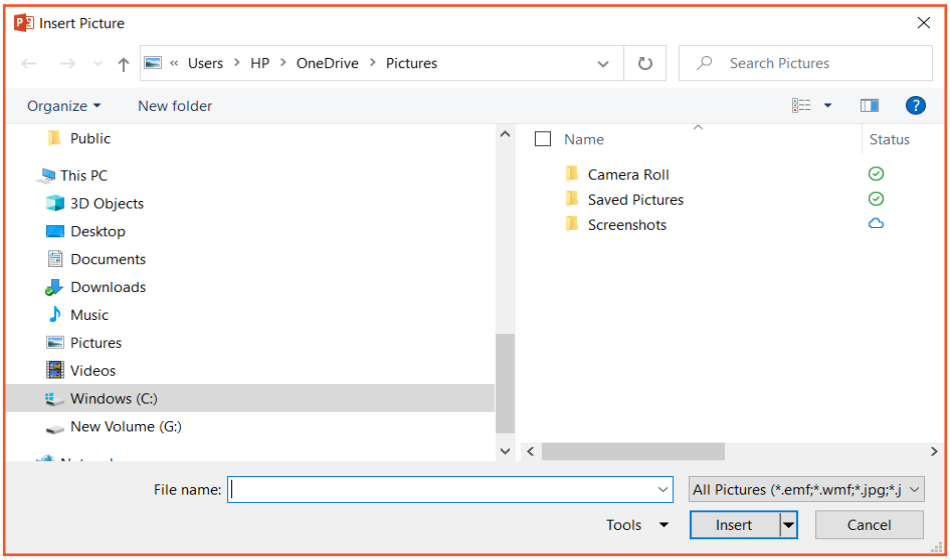
6. Guji bandhig maran (blank presentation).
7. Guji carabka Home, kadib guji slide cusub (New Slide), guji slide from outline.
8. Adigoo ka shidaal qaadanaaya casharkii aan soo barannay ee qoraal fayl Word ah loogu rarayay PowerPoint fayl, qoraalka faylkan notepad ka ku jira u rar slide-ka cusub ee faylka PowerPoint-ga ah.

Gelinta iyo Qaabeynta Sawirka

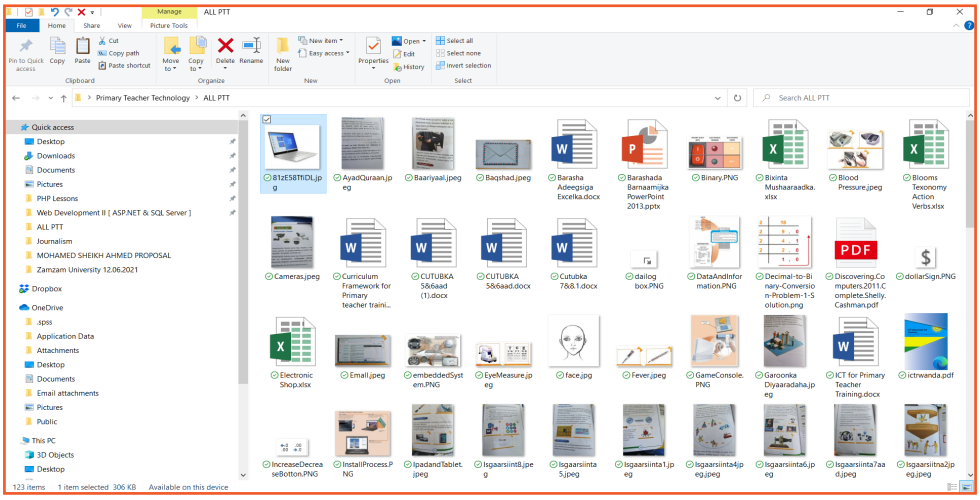
Waxaa suuragal ah in aad u baahato in aad sawirro ku darto bandhigaada ama aad sawirrada u qaabayso sida aad rabtid. Haddaba, waxaad halkaan ku baranaynaa xirfaddii kuu sahli lahayd howshaas. Haddaba, tusaale ahaan, haddii aad doonayso in aad sawir galiso slide-ka aad doonayso, raac talaabooyinkaan hoose:

1. Bilaw barnaamijka PowerPoint 2013. Guji bandhig maran "Blank Presentation"
2. Guji carabka **File**, kadib guji amarka fur (open), ka raadi cajalada (drive) ama galka oo kuugu jiro faylka magaciisu yahay "**Barashada Barnaamijka PowerPoint 2013.pptx**".

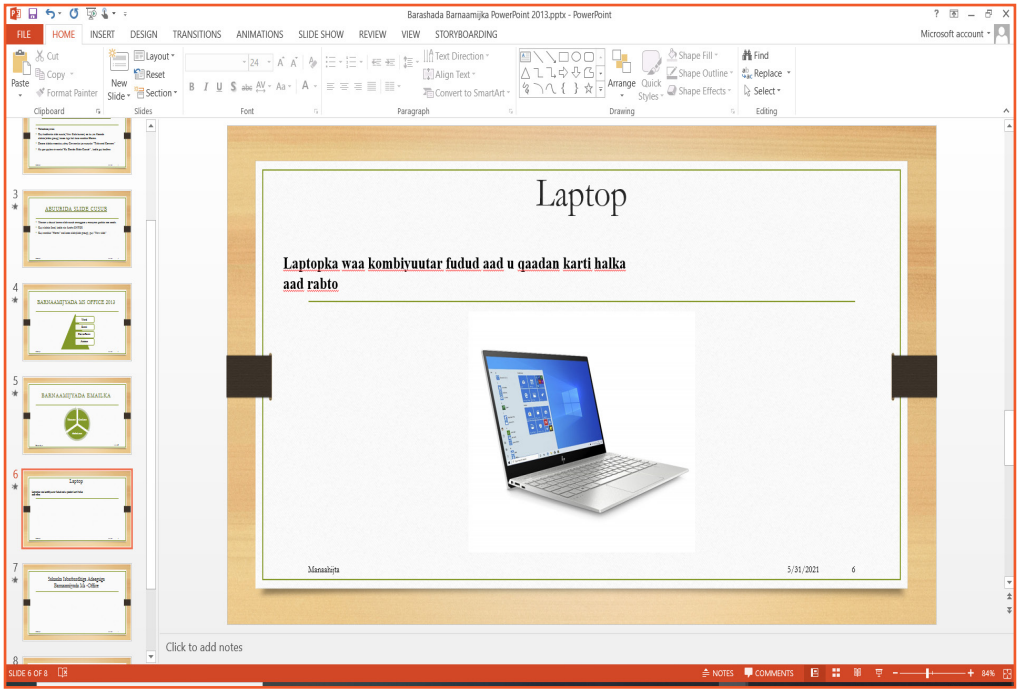
1. Guji Gali Sawirka astaanta Faylka (Insert Picture from file icon) booska qoraalka ee gudaha Slide-ka.



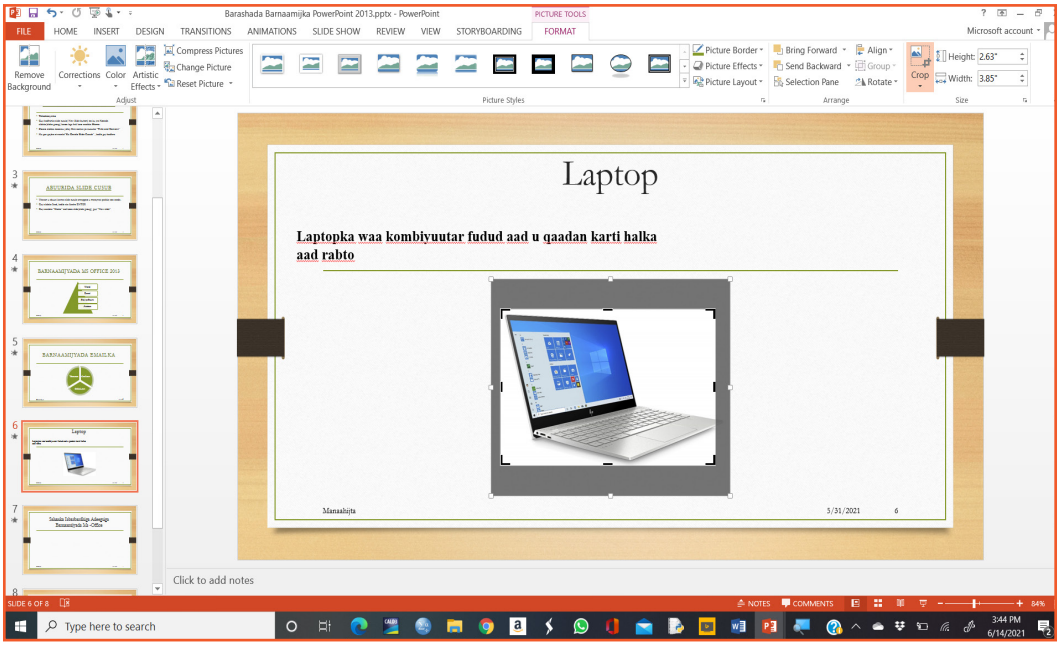
2. U gudub cajalada (drive) ama galka kombiyuutarka oo ah halka aad ku keydiso Faylashaada Xogta, ka soo xulo sawir . Sida sawirka hoose ka muuqata.



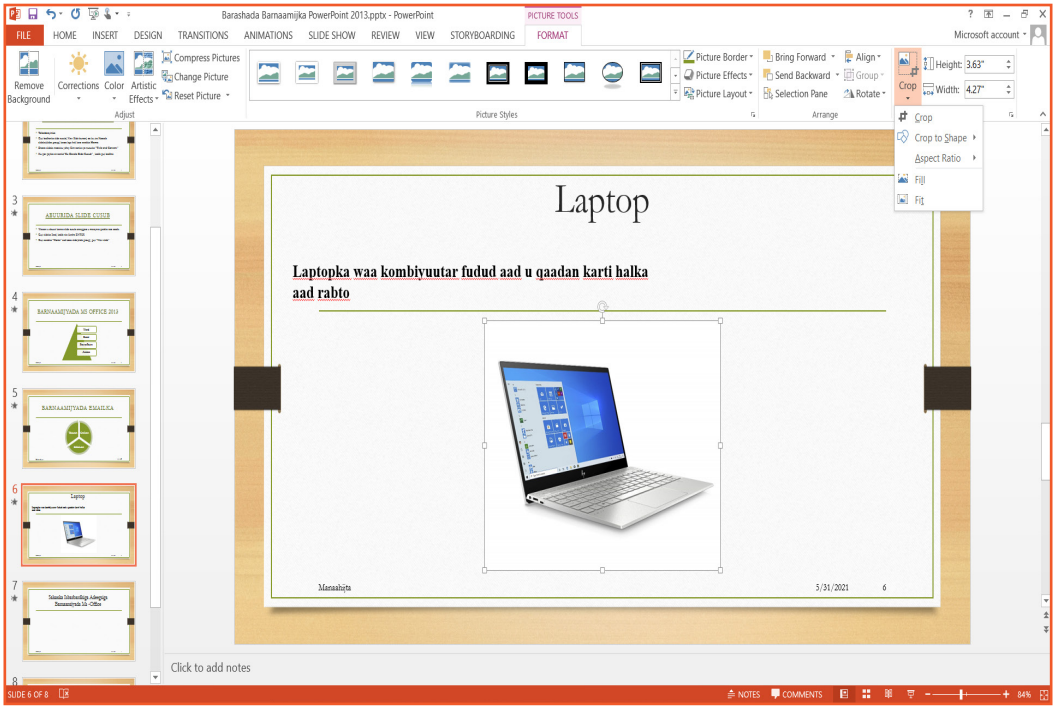
3. Guji badhanka gelinta(Insert)



4. Guji badhanka Jarida (**Crop**) ee kooxda cabbirka, kadib hagaha dul dhig sawirka ka jar (crop) intaa aadan doonaynin ee sawirka.



5. Guji meesha banaan ee slide-ka.

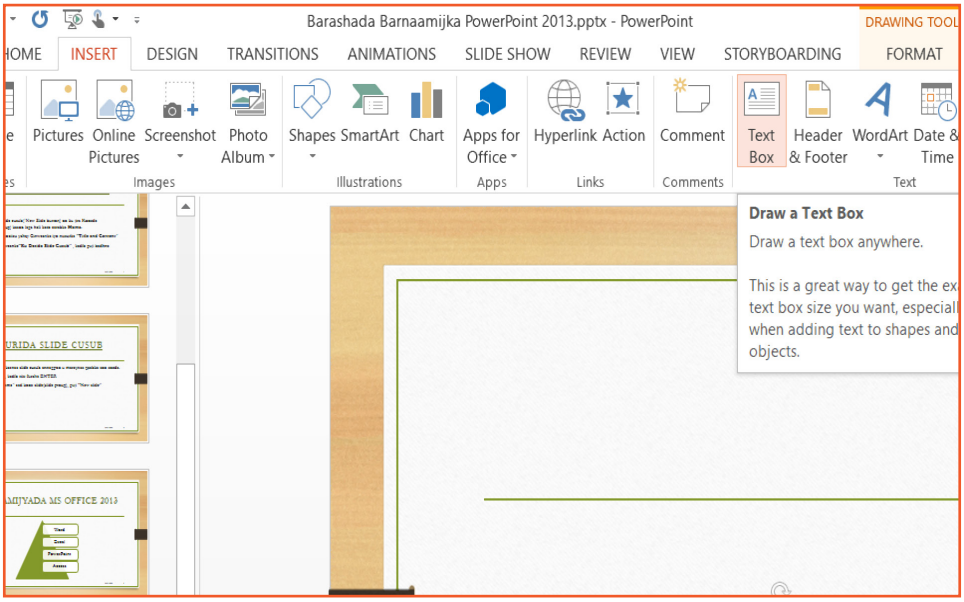


Gelinta Sanduuq Qoraalka (text box)

Waxaa horey u soo baratay qaabka loo geliyo, qoraal slideka adigoo adeegsanaya ciwaanka (title) ama nuxurka (content). Had iyo jeer waxaad ubaahantahay qoraal dheeri ah in aad ku dartid slideka, sidaa darted sanduuqa qoraalka (text box) waxa uu kuu ogolaanaya in aad soo geliso qoraalo dheeraad ah slideka. Raac talaaboyinka hoose si aad u soo geliso sanduuqa qoraalka (text box).

Talaabooyinka

1. Bilaaw barnaamijka PowerPoint 2013. Guji bandhig maran "Blank Presentation"
2. Guji carabka **File**, kadib guji amarka fur (open), ka raadi cajalada (drive) ama galka oo kuugu jiro faylka magaciisu yahay "**Barashada Barnaamijka PowerPoint 2013.pptx**".
3. Guji carabka **Insert** ee Ribbonka, guji badhanka sanduuqa qoraalka (text box) ee kooxda qoraalka (text group), u rar meel banaan ee dhanka bidixda.



4. Qor qoraalka ah "**Laptopka waa kombiyuutar fudud oo aad u qaadan karti halka aad rabto**"

5. Hal mar riix **Ctrl + S** si aad u keydi hawsha aad qabatay.

Waxqabadka 2aad:

Cilmi-baaris: raadi waxtarka loo adeegsado sanduuqa qoraalka (Text Box).

Gelinta Shaxda (Chart)

Inta badan waxaaa loo baahdaa in laysku xidho (xiro) macluumaadka iyo qoraalka taasoo ay caawinayso fahamka casharka. Haddii kombiyuutarkaaga kuugu jiro barnaamijka Excel, PowerPoint waxa uu adeegsada Excel si uu abuuro shax (chart). Sidaa darteed casharkaan waxa aan ku baran doonaa sida loogu soo daro shax (chart) barnaamijka PowerPoint.

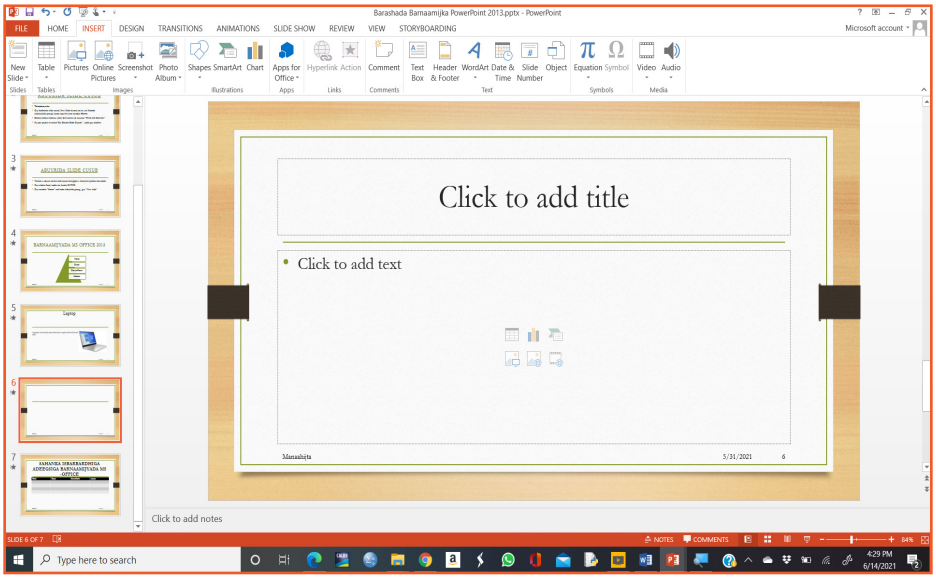
Talaabooyinka

1. Bilaaw barnaamijka PowerPoint 2013. Guji bandhig maran "Blank Presentation"

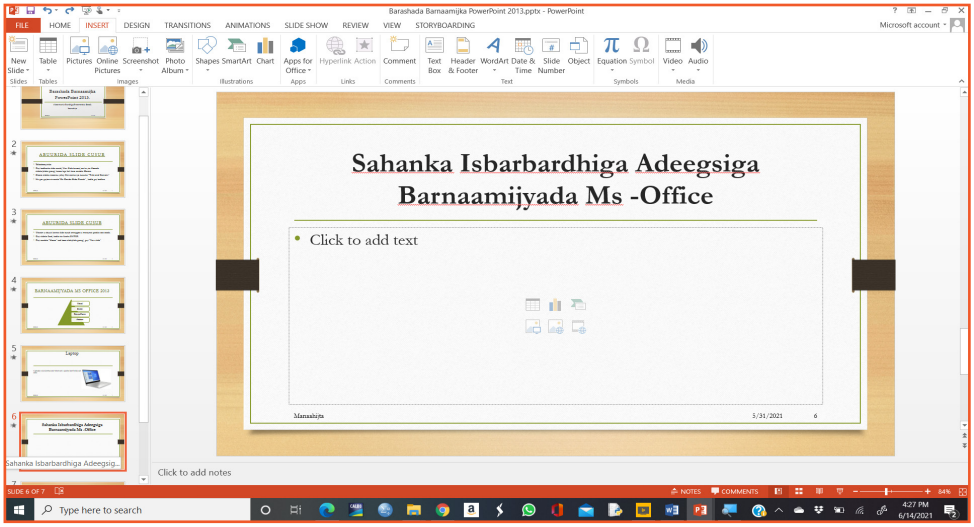
2. Guji carabka **File**, kadib guji amarka fur (open), ka raadi cajalada (drive)

ama galka oo kuugu jiro faylka magaciisu yahay “**Barashada Barnaamijka PowerPoint 2013.pptx**”.

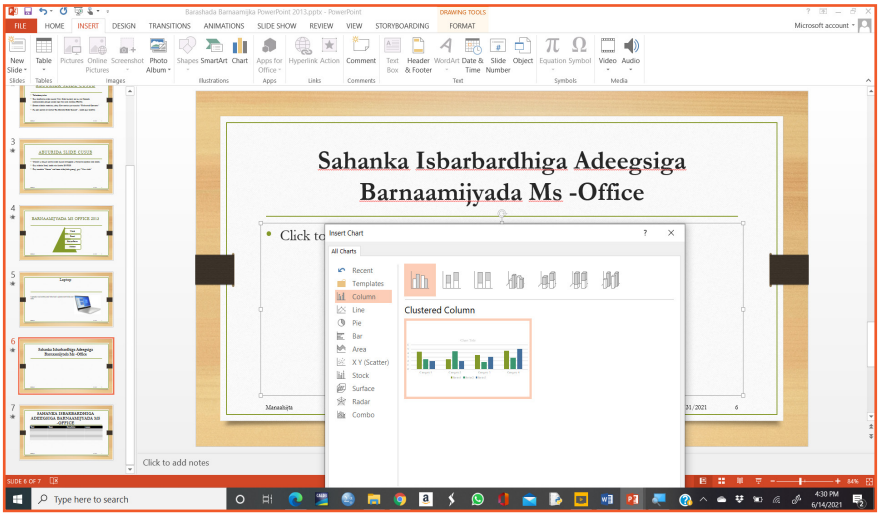
3. Guji slide-ka 6aad.



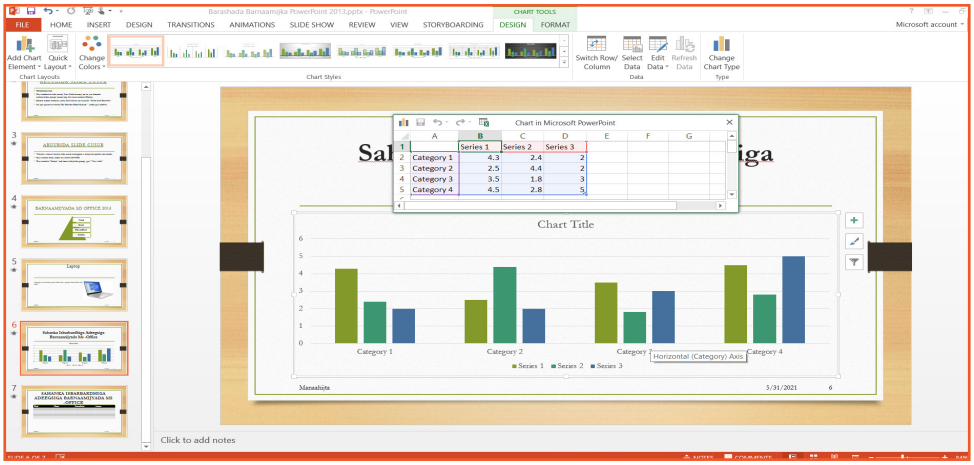
4. Guji halka lagu qoro ciwaanka, ka dib qor “**Sahanka is Barbardhigga Adeegsiga Barnaamijyada Ms -Office**”.



5. Guji Astaanta Shaxda (Chart) ee qaybta tusmada (contents-ka) lagu qoro. Dooro nooca shaxda (chart) aad dooneysid, sida midka sawirka hoose ka muuqda ee loo yaqaano shaxda column (column chart).

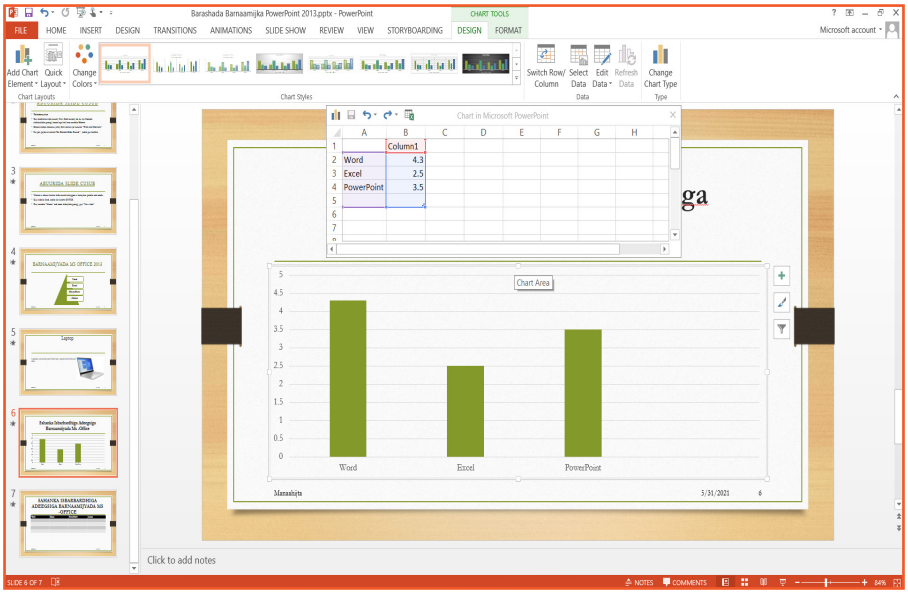


6. Guji ok. Kadib waxaa furmi doonaa barnaamijka Excel sida ka muuqata sawirka hoose.



7. . Baddel qoraalka jadwalka excel Category 1 ku beddel Word, Category 2 ku beddel Excel iyo Category 3 ku beddel PowerPoint iska tirtir oo baabi'l Category 4. Adigoo muujinaya (highlight). Kadib riix furaha delete ee furaha looxada (keyboard).

8. Tirtir laba joog tax (column) adigoo muujinaya (highlight) kadib riix furaha delete ee furaha looxada (keyboard).
9. Tirtir Unug (cell) ee ku qoran Series 1. Waxaa kuu soo bixi doona sawirka hoose.



Waxqabadka 3aad:

Cilmi- baaris: Waa maxay xariirka ka dhexeeyo barnaamijka Excel iyo Barnaamijka PowerPoint marka la joogo in shax lagu soo daro PowerPoint.

Gelinta Jaantuuska (Table)

Marka aad abuuraysid bandhig (Presentation) waxaa laga yaabaa in aad u haato sida xogta aad haysto aad u gelin laheed jadwal (table). Raac talaabooyinka hoose si aad howshaas u qabato:

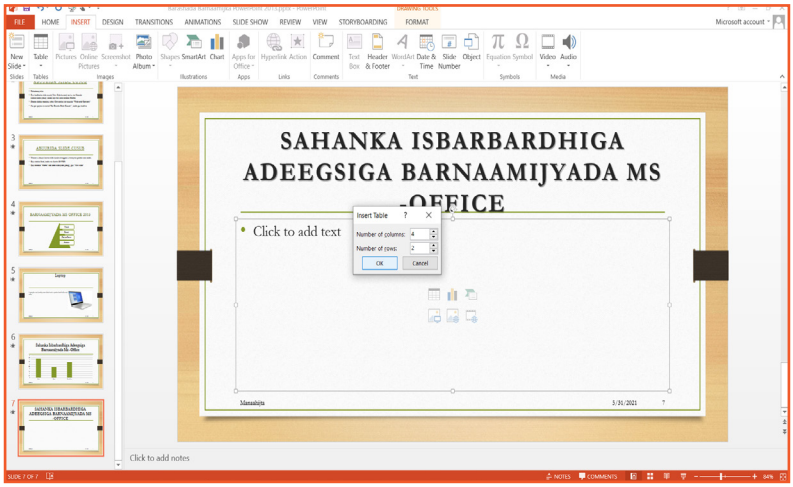
Talaabooyin

1. Bilaaw barnaamijka PowerPoint 2013. Guji bandhig maran "Blank Presentation"
2. Guji carabka **File**, kadib guji amarka fur (open), ka raadi cajalada (drive) ama galka uu kuugu jiro faylka magaciisu yahay "**Barashada Barnaamijka PowerPoint 2013.pptx**".
3. Dooro Slideka 7aad, riix furuha [Enter]

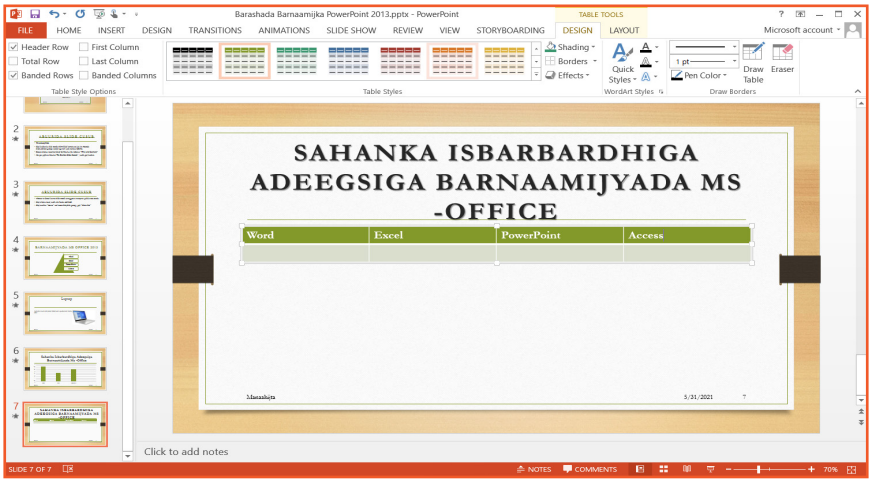
4. Guji astaanta Jadwalka (table) ee qebyta lagu qoro nuxurka (content).

5. Dooro tirada joog taxa (columns) iyo tirida jiif taxa (rows).

6. Guji Ok.



7. ku qor joog tax (column) 1aad Word, kan 2aad Excel, Kan 3aad PowerPoint iyo kan 4aad ee ugu dambeeya Access, sida sawirka hoose ka muuqata.



Waxqabadka 4aad:

Cilmi-baaris: Raadi waxa ay kula duwaanyihiin adeegsiga: shaxda (chart) iyo jadwal (table) ee marka la joogo barnaamijka PowerPoint, adigoo tusaale baraktical ah (practical) ku muujinaayo.

Casharka 4aad: Gabagabaynta bandhiga (presentation).

Ujoodooyinka

Dhammaadka casharkaan bare-ardaydu waxa ay awood u yeelanayaan in ay:

1. Beddelaan muuqaalka guud ee slide-ka
2. Adeegsan karaan amarka slide show
3. Dejinta Is-beddellada iyo xilliga Slide-ka
4. Qiimayn karaan bandhiga (Presentation)

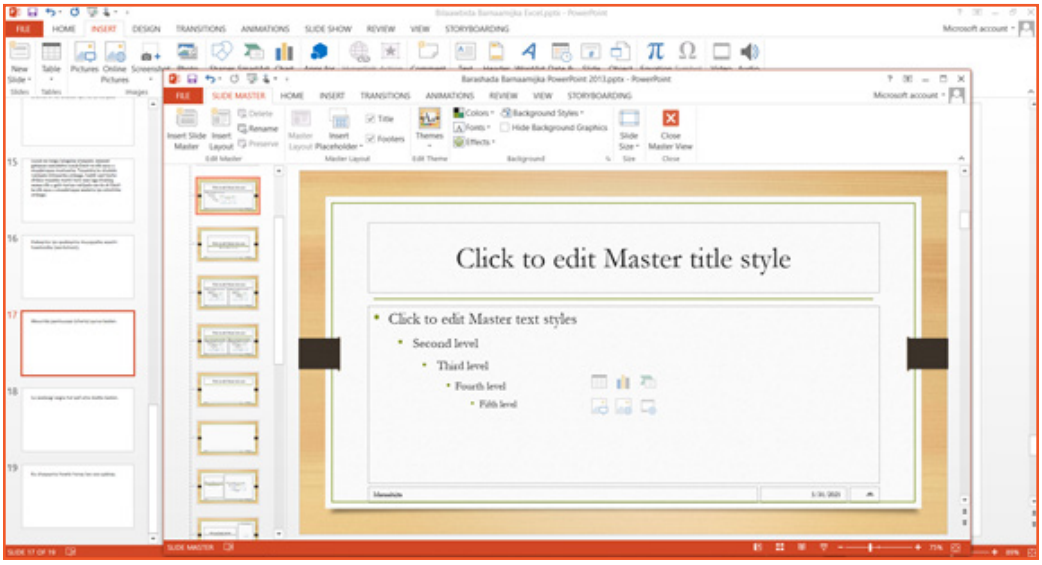
PowerPoint waxa uu ku siinayaa muuqaalo soo jeedasho leh oo kaa caawinayaa in aad si haboon aad u soo bandhigto soo jeedintaada.

Baddelida muuqaalka guud (master) ee slide-ka

Soo bandhigid kasta oo ka mid ah PowerPoint waxa ay leedahay koox (master slide) ah oo kaydiya macluumaadka ku saabsan dulucda iyo isbadalka naqshadaha, oo ay ku jiraan booska, cabirka qoraalka iyo maaraynta waxyaabaha kujira sida: asalka (background), midabada iyo saamaynta.

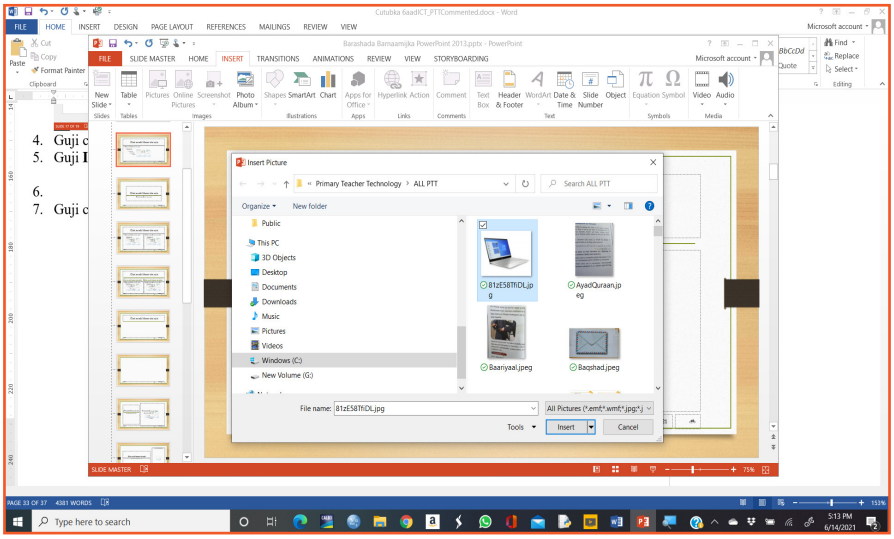
Talaaboyin

1. Bilaw barnaamijka PowerPoint 2013. Guji bandhig maran "Blank Presentation"
2. Guji carabka **File**, kadib guji amarka fur (open), ka raadi cajalada (drive) ama galka uu kuugu jiro faylka magaciisu yahay "**Barashada Barnaamijka PowerPoint 2013.pptx**".
3. Guji carabka **View**, kadib guji **slide master**.

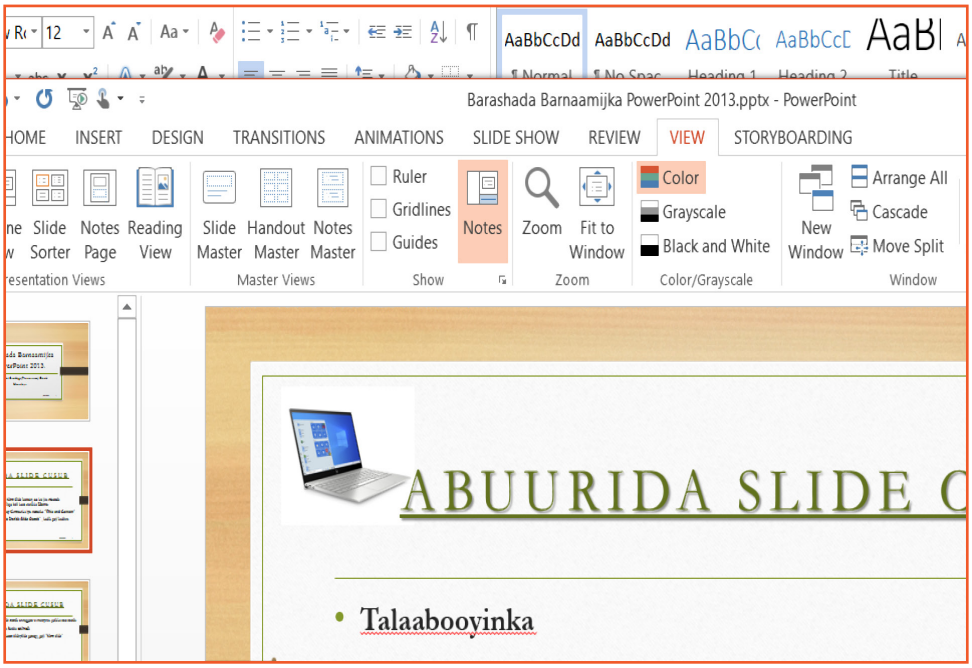


4. Guji carabka **Insert**, kadib guji **Picture**, ka raadi faylka sawirka meesha uu kugu keydsan yahay.

5. Guji **Insert**. Yaree sawirka oo dhig dhanka bidixda ee slide-ka.

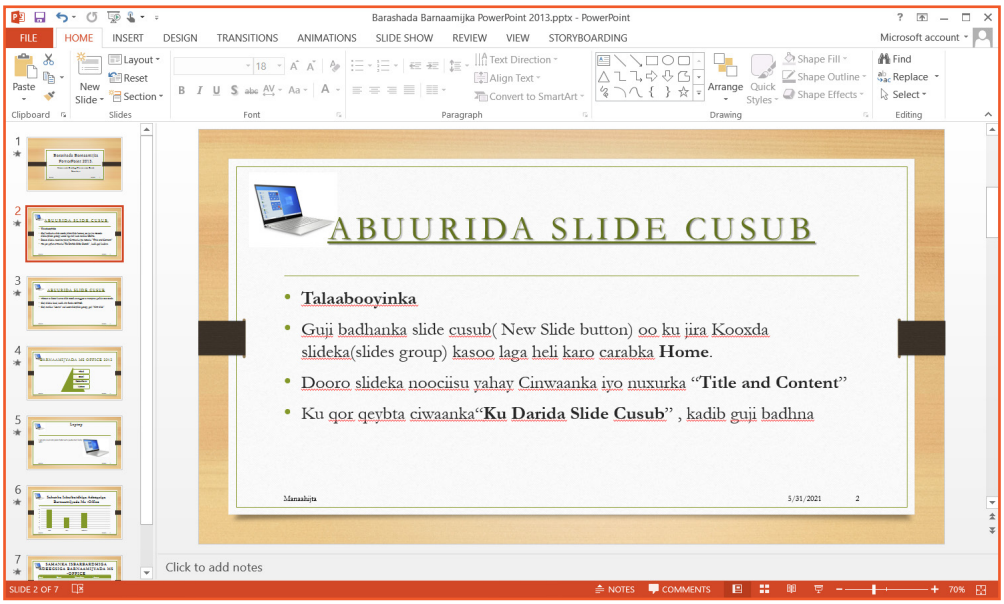


6. Guji carabka **View**, kadib guji muuqaalka caadiga ah (**normal view**). Waxaa soo muuqan doona sawirkan hoose.



Waxqabadka 1aad:

Sawirka hoose sida ka muuqata gaar ahaan qeybta Master View's soo qor imisa nooc ayaa jirta oo master slide ah. Kadib ogoow mid walba sida uu shaqaynaayo.

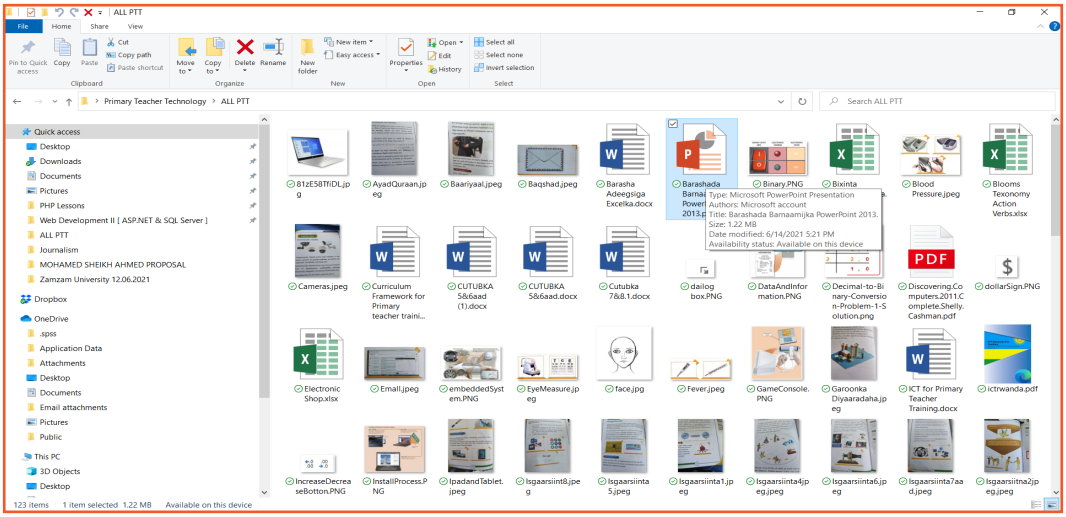


Adeegsiga Amarada Slide Show

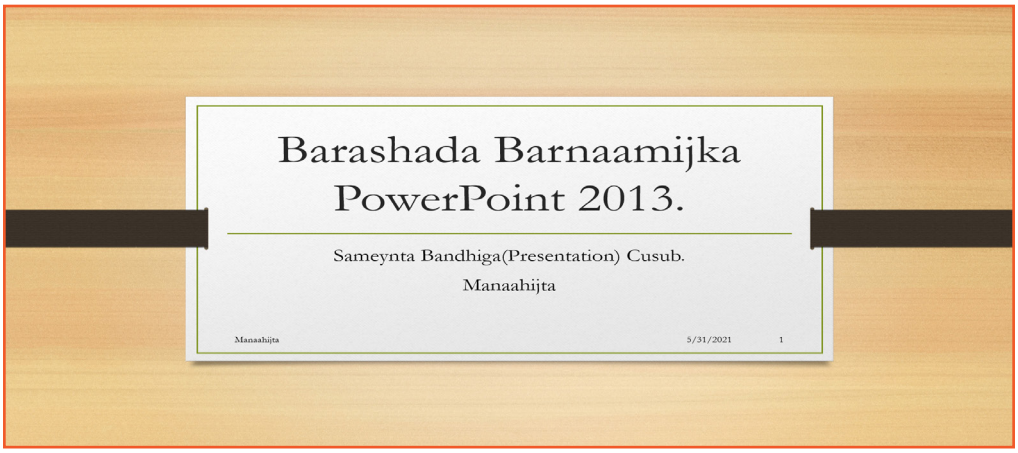
Muuqaalka **Slide Show** waxaa loo isticmaalaa ugu horeyn in lagu gaarsiiyo bandhig (presentation) dhagaystayaasha, waxaa lagu soo bandhigi karaa labo qaab oo kala ah: kombiyuur internet leh ama iyada oo loo marayo borojektar ku xiran kombiyuutarkaaga.

Talaaboyinka

1. Bilaaw barnaamijka PowerPoint 2013. Guji bandhig maran "Blank Presentation".
2. Guji carabka **File**, kadib guji amarka fur (open), ka raadi cajalada (drive) ama galka uu kuugu jiro faylka magaciisu yahay "**Barashada Barnaamijka PowerPoint 2013.pptx**".
3. Ama aad halka uu ka yaalo faylka "**Barashada Barnaamijka PowerPoint 2013. pptx".** Kombiyuutarkaaga, kadib labo jeer oo israacsan guji sida labada sawir hoose ka muuqanayso.



4. Guji slide-ka 1aad, kadib guji badhanka slide show ee status bar-ka.
5. Riix furaha (spacebar) sida aad u aado slide-ka ku xiga. Ama riix falaarta kor (up arrow) ama falaarta hoose (down arrow) si aad slide-yada ugu kala gudubto



Qorshaynta Is-beddellada iyo xilliga ee Slide-yada

Is-beddellada slide-ka (**slide transitions**): waa qaab gaar ah oo lagu maamulo socodka slide-ka inta lagu guda jiro bandhigga (slide show). Xilliga Slide-ka (**slide timing**): waxaaa loola jeedaa xaddiga waqtiga slide-ka ka muuqanaayo shaashadda. Si aan u sameyno Is-beddellada slide-ka (**slide transitions**) iyo Xilliga Slide-ka (**slide timing**): raac talaabooyinka hoos ku xusan:

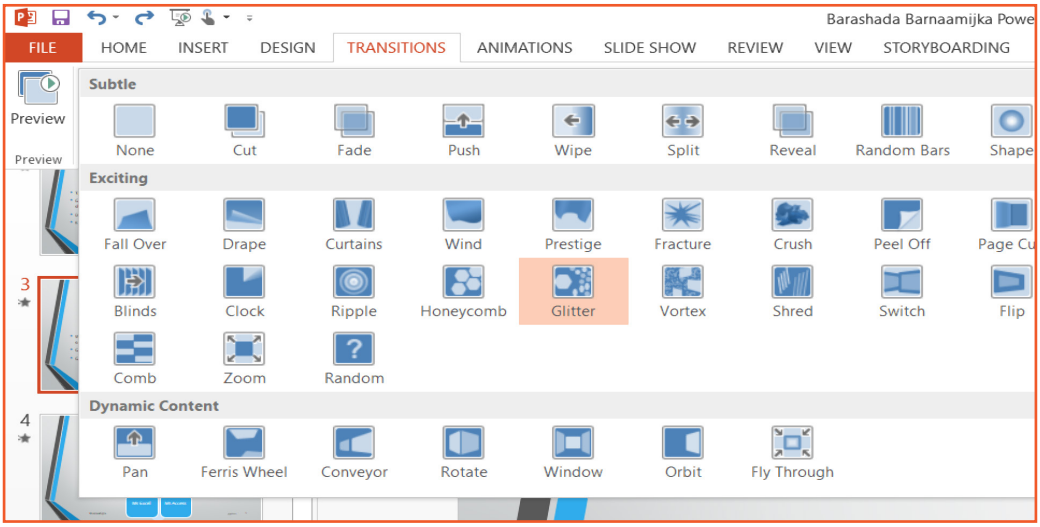
1. Bilaaw barnaamijka PowerPoint 2013. Guji bandhig maran "Blank Presentation".
2. Guji carabka **File**, kadib guji amarka fur (open), ka raadi cajalada (drive)

ama galka uu kuugu jiro faylka magaciisu yahay "**Barashada Barnaamijka PowerPoint 2013.pptx**".

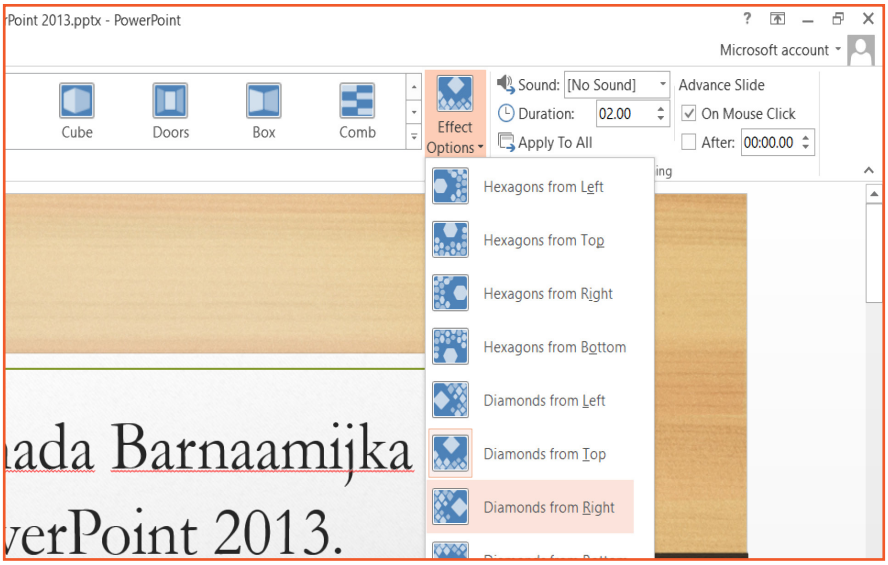
3. Ama aad halka uu ka yaalo faylka "**Barashada Barnaamijka PowerPoint 2013.pptx".**

4. Hubi in Slide 1aad uu kuu dooran yahay, kadib guji carabka **Transitions** ee Ribbonka

5. Guji badhanka **More** kooxda **Transition** slide-ka, kadib guji **Glitter** ee ka mid ah qaybta **(Exciting section).**



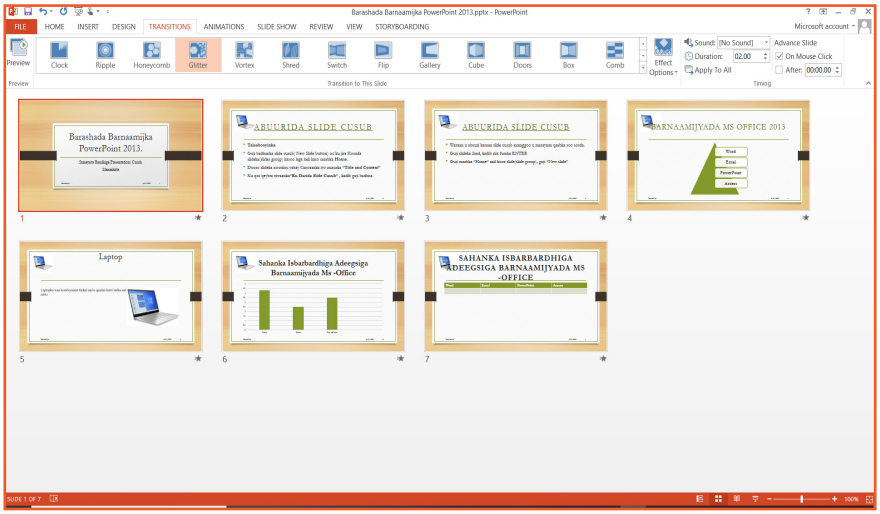
6. Guji badhanka **Effect Options** kooxda transition slideka, guji **Diamonds** ee qeybta kore, guji falaarta hoose ee **duration**-ka. kooxda Waqtiga ilaa 2.00 gaarsii, kadib guji badhanka **Preview** ee kooxda Preview.



7. Guji badhanka **Apply to All** ee kooxda timing, kadib guji badhanka **slide sorter** ee status bar-ka.

8. Si aad isbedelista slides-ka ee ku xiran gujinta hagaha (mouse) uguna guurtid isbelidda waqtiyaysan ee aad qorshaysanaysid, Guji **On Mouse** ka qaad tigta (sax) Saaran sanduuqa ka hooseeya ee **slide advance** ee kooxda timing

9. 2Guji falaarta **After up** ilaa oo ka muuqata sanduuqa qoraalka, ka dibna riix badhanka Apply to all.

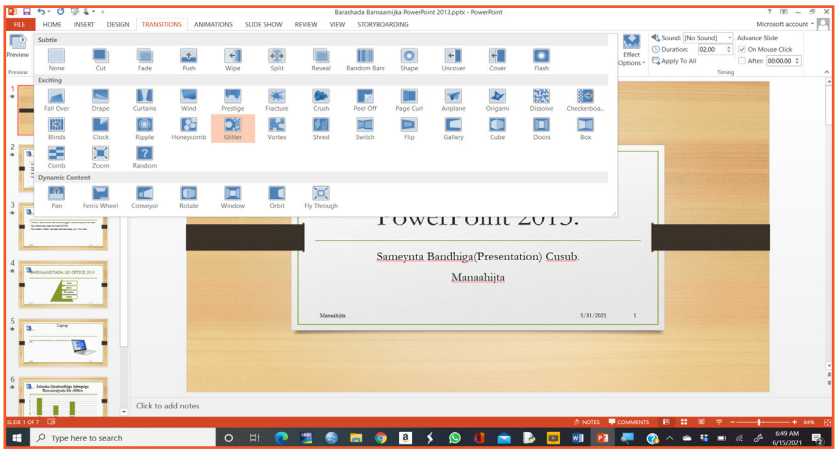


10. Guji badhanka **slide show** ee bar-xaladeedka (status bar), kadib fiiri sida uu noqonaayo.

11. Markaad aragto slide madow dhamaadka slide show, riix [**Spacebar**], kadib keydi isbeddeladaada

Waxqabadka 2aad:

Raac talaaboyinka hoose si aad u qabato Waxqabadka ka muuqda sawirka hoose.



1. Bilaw barnaamijka PowerPoint 2013. Guji bandhig maran "Blank Presentation".

2. Guji carabka **File**, kadib guji amarka fur (open), ka raadi cajalada (drive) ama galka uu kuugu jiro faylka magaciisu yahay "**Barashada Barnaamijka PowerPoint 2013.pptx**".

3. Ama aad halka uu ka yaalo faylka "**Barashada Barnaamijka PowerPoint 2013. pptx".**

4. Guji carabka **transitions** kadibna mid mid u fiiri is-beddelada slide-ka (slide transition).

5. Guji carabka **transitions** tig (sax) kordhi waqtiga uu soconaayo slide-ka ilaa **00:20.00.**

Qiimeynta bandhiga (Presentation)

Bandhiga (Presentation) si habeysan loo abaabulay waxa ay u baahan tahay fikir iyo u diyaar garow. Bandhiga (presentation) wax ku ool ka ah waa mid diirada uu saarayo qoraalo kooban iyo muuqaal isla socda kaasoo leh soo jiidasho, taasi waxa ay abuuraysaa in soo jeediyaha (presenter) in si fudud u soo bandhigo cashirkiisa dhageystayaasha u fududeeyo fahanka.

Markaad qiimeynayso bandhig, waxaa muhiim ah in aad sameyso talooyinka hoose ku xusan.

1. Ka dhig fariintaada mid diirada saareysa, soo koob qoraalkaaga.
2. Ka dhig naqshaddu mid fudud, si fudud loo akhriyi karo, kuna habboon mawduuca.
3. Xullo midabbo soo jiidasho leh oo ka dhigaya slidka mid si sahlan loo akhrin karo.
4. Xullo farta iyo qaababka ay fududahay in loo akhriyo muuji qoraalka muhiimka ah adiga adeegsanayo amarka **bold.**
5. haku soo darin slide-kaaga qoraalo, sawiro iyo muuqaalo oo loo baahneen ama u san xariir la lahayn casharkaaga.
6. Adeegso muuqaallo si ay kaaga caawiso in la fahmo casharkaaaga.

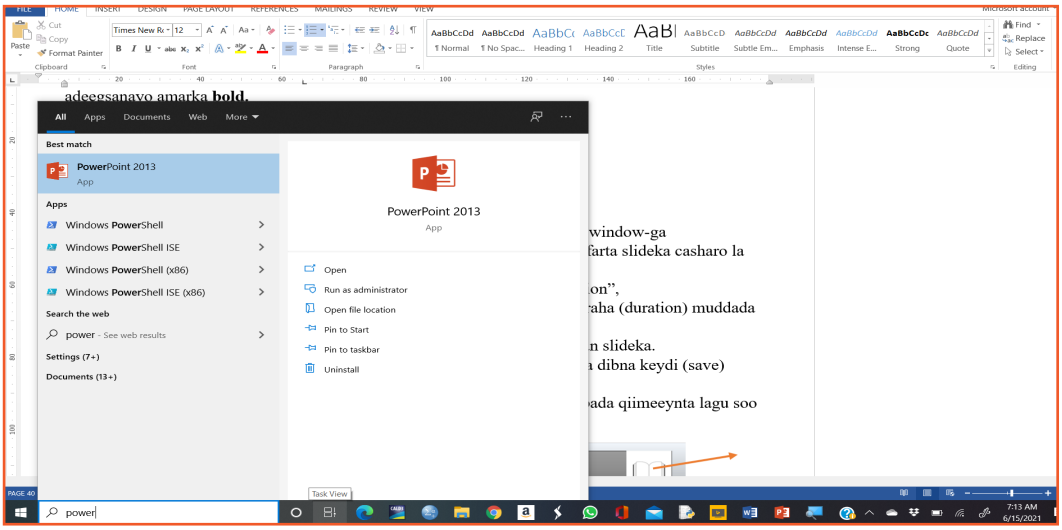
Gunaanad

Cutubka waxa aan ku soo baranay qeybo badan oo muhiim u ah Bare-arday waxa aan ka mid ah:

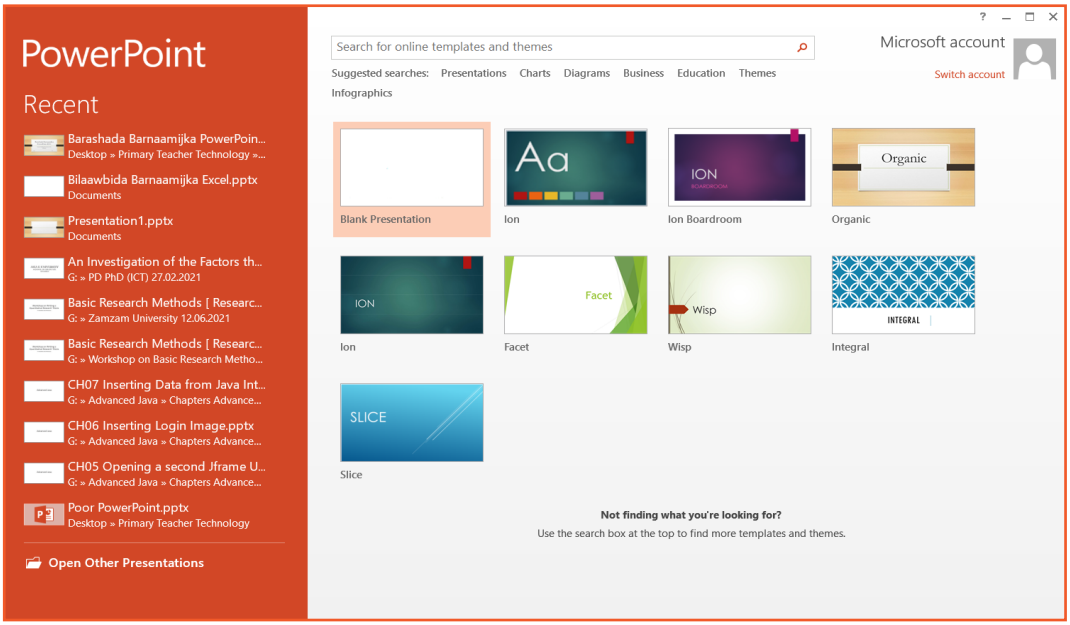
- Qeexidda barnaamijka MS PowerPoint 2013.
- Gelinta slide-ka qoraal, ku darida slide cusub.
- Beddelida naqshadaha kal duwan ee barnaamijka PowerPoint 2013.
- Xulashada muuqalada kal duwan slide-ka
- Daabicida slides-ka.
- Habaynta qoraalka, u beddelida qoraalka farshaxanka casriga ah (SmartArt).
- Gelinta wax ka beddelida, tafatirida (edit), koobiyeeynta (copy) qaababka (shapes).
- Ku darida cinwaan koraad (header) iyo ciwaan hoosaad (footer).
- U beddelida faylka MS – Word 2013 midka MS - PowerPoint 2013.
- Gelinta, qaabaynta sawiro, sanduuqa qoraalka, shax (chart) iyo jadwal (table).
- Adeegsiga muuqaalka guud ee slide-ka
- Qorshaynta Is-beddellada iyo xilliga isbadellada ee Slide-yada
- Qiimeynta bandhiga (Presentation).

Qiimeynta cutubka

1. Qeex barnaamijka PowerPoint 2013.
2. Bilaw barnaamijka PowerPoint 2013, adigoo ku qoraya qaybta raadinta ee window-ga



3. Guji astaanka PowerPoint-ga waxaa kuu soo muuqanaya sawirka hoose:



4. Guji bandhig maran(blank presentation)
5. Sameey bandhig (presentation) cusub oo ka kooban afar slide, kadib ku qor afarta slideka casharo la socda sawiro, farshahanka casriga (Smart Art) iyo jadwal.
6. Aad muuqaalka Slide Sorter, Guji slideka 1aad, kadib dalbo "Vortex transition",
7. U beddel ikhtiyaarka waxtarka (effect option) illaa Gunta, u beddelo xawaaraha (duration) muddada illaa 3.00, ka dibna u adeegso dhammaan slideka.
8. U beddel waqtiga (timining) illaa 5 ilbiriqsi, kadibna Mari (apply) dhammaan slideka.
9. U beddel muuqaalka caadiga ah (Normal View), fiiri muuqaalka slide-ka, ka dibna keydi (save) hawsha aad qabatay.
10. Qiimee bandhigga (presentation) ee sawirka hoose adoo adeegsanaya qodobada qiimeeynta lagu soo sharaxay dhammaadka casharka. Buuxi sanduuqyada banaan ee sawirka hoose la socda.

Cutubka 8aad: Barashada Barnaamijka Excel

Hordhac:

Microsoft Office Excel 2013: waa barnaamij u oggolaanaaya dadka adeegsada inay habeeyaan xog, si dhammaystiran u xisaabiyaan xisaabaadka, soo bandhigaan xog leh jaatuusyo, sawirro iyo muuqaal qurxoon. Barnaamijka excel waxa uu ka kooban yahay afar qaybood oo kala ah:

- **Xaashi-Hawleed (Worksheet):** waxa ay u oggolaanaysaa adeegsadayaasha inay galaan, xisaabiyaan, maareeyaan, oo falanqeeyaan xog ka kooban lambarro iyo qoraallo. Erayga xaashi-hawleed micnahiisu waa isla xaashida (Spreashsheet) uu isticmaalo xisaabiyaha.
- **Jaantus (Charts):** Barnaajimka Excel-ka waxaa lagu soo bandhigikaraa macluumaad leh qaab sawiro muqaallo kala duwan leh.
- **Taxanaha iyo kaydinta xogta (Lists):** Mar haddii isticmaale uu xogta geliyo xaashi-hawleedka (Worksheet), wuu kala sooci karaa xogta, waxa uuna raadin karaa xog gaar ah, sidoo kalena xulan karaa xog gaar ah.
- **Caawiyaha Websaydka (Web support):** waxa uu u oggolaanayaa dadka isticmaala inay ku kaydsadaan xaashi-hawleed Excel ah ama qaybo ka mid ah xaashi-howleedkaas (worksheet) qaab Hypertext Markup Language (HTML) ah, sidaa darteed adeegsade waxa uu arki Karaa oo maarayn Karaa xaashi-hawleedka (worksheet) asagoo adeegsanaaya baroowser (browser).

Ujeedooyinka Cutubka

Dhammaadka cutubka bare-ardaydu waxa ay awood u yeelanayaan in ay:

1. Ku shaqayn karaan barnaamijdka Excelka.
2. Adeegsan karaan qaacidooyinka barjaamijka Excel.
3. Gelin karaan sumadda (labels) iyo qiimaha, sidoo kale adeegsan karaan botoonka wadarta (Sum button), Tafatiri karaan unugyada xaashi – hawleedka (worksheet)
4. U kala wareegi karaan muuqaallada ka duwan ee xaashi-hawleedka (worksheet).
5. Daacibi karaan xaashi – hawleedka.
6. Abuuri karaan isla'eg adag (Complex Formula)
7. Qaabayn karaan qoraalka unuga (cell) (formatting text), Badelidda farta (font) iyo cabirka farta (font size).
8. Gelin karaan, isla markaasna tirtiri karaan jiif taxa (rows) iyo joog taxa (columns).
9. Midibayn karaan, xuduud u samayn karaan jiif taxa (rows) iyo joog taxa (columns) xaashi-hawleedka (worksheet). Magacaabi karaan, rari karaan xaashi-hawleedka.
10. Abuuri karaan, habayn karaan, Rari karaan (move), badeli karaan cabirka jaantuuska (resize a chart), Badeli karaan naqshadda jaantuska (chart design).

Tusmada cutubka

Cutubkaan waxaanuu ka kooban yahay afar cashar oo kal ah:

Casharka 1aad: Bilaabidda Barnaamijka Excel-ka.

Casharka 2aad: Ku shaqaynta Qaacida Xisaabkeedka ee Barnaamijka Excel.

Casharka 3aad: Habaynta iyo Qaabeynta Xaashi-Hawleedka.

Casharka 4aad: Shaxda (Charts).

Habka Waxbaridda

1. **Sharaxaad (Fasiraad Macallin)**
    - Macallinku wuxuu sharxayaa:
        - Waa maxay Excel?
        - Faa'iidooyinka Excel ee xisaabaadka, jadwaleynta xogta, iyo falanqaynta tirakoobka.
        - Farqiga u dhexeeya Excel 2013 iyo noocyada kale.
2. **Sameynta Baraktikal Excel 2013 (Practice/Gacan-ku-samayn):**
    - **Bilaabidda Barnaamijka Excel**
        - Ardayda waxa la barayaa sida barnaamijka Excel loo furo oo looga shaqeeyo.
    - **Abuuridda xaashi-hawleed cusub iyo beddelidda magaceeda**
        - Waxay bartaan sida xaashi cusub loo sameeyo, loona magac badd-alo.
    - **Gelinta iyo tafatirka qoraalka ku jira xaashida**
        - Waxay ku tababaranayaan gelinta xogta iyo tafatirka unugyada (cells).
    - **Abuuridda isla'eg (Formulas)**
        - Waxay bartaan sida loo qoro isla'egyo fudud sida: =A1+B1 ama =SUM(A1:A5)
    - **Sida loo daabaco Excel File**
        - Waxay ku tababaranayaan sida loo diyaariyo file-ka Excel si loo daabaco (Print Preview, Page Setup, iyo Print Area).

Casharka 1aad: Bilaabidda Barnaamijka Excelka.

Su'aal: Sheeg siyaabo kala duwan ee looga faa'idaysto Ms-Excel 2013?

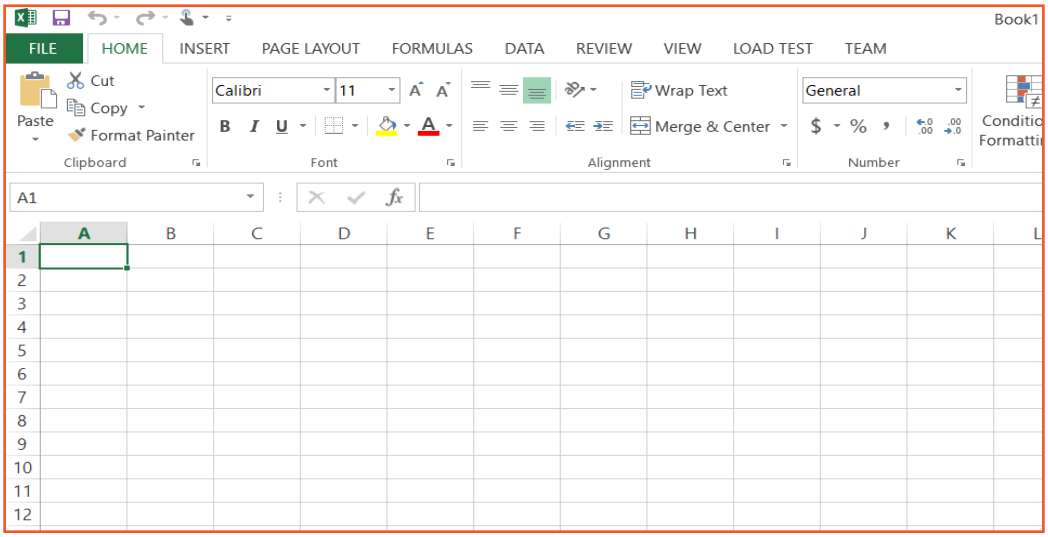
Ujeedooyinka casharka

Dhammaadka casharkan bare-ardaydu waxa ay awood u yeelanayaan in ay:

1. Adeegsan karaan barnaamijka Excelka.
2. Dulmar guud ku samayn karaan aasaasiyada Excel 2013.
3. Isticmaali karaan qaacidooyinka barjaamijka Excel 2013.
4. Gelin karaan sumadda (labels) iyo qiimaha, sidoo kale adeegsan karaan botoonka wadarta (Sum button).
5. Tafatiri karaan unugyada xaashi – hawleedka(worksheet)
6. U kala wareegi karaan muuqaallada kala duwan ee xaashi-hawleedka (worksheet).
7. Daabici karaan xaashi – hawleedka.

Waa maxay Aasaasiyada Barnaamijka Excel 2013?

Waa barnaamij elektaroonig ah oo kuu ogolaanaya in aad ku qabsato howl xisaabeed, kaydinta iyo isku habaynta macluumaadkaada shakhsi ahaaneed iyo kuwa dad kale kaala dhexeeya. **Spreadsheet** waxaa loo yaqaan xaashi – hawleed (worksheet). Hal xaashi-hawleed (worksheet) iyo wax ka badan waxa ay noqon karaan hal buug – hawleed (workbook) kaasoo noqonaya fayl Excel ah. Barnaamijka Excel 2013 waxa uu ka kooban yahay 1,048,576 R jiif-tax ah (rows), 16,384C oo joog - tax ah (columns). Waxaa kale oo uu yeelanayaa tiro xaashi-hawleed (Worksheet). Barnaajimka Excel waxa uu ka kooban yahay tiro unugya ah (cells), unugga (cell) Excel waxaa loo yaqaanaa halka ay iska jaraan joog-taxa (column) iyo jiif-taxa (row). Sida sawirka hoose oo kale, gaar ahaan midka markaas la dul taagan yahay (current cell) **A1**.

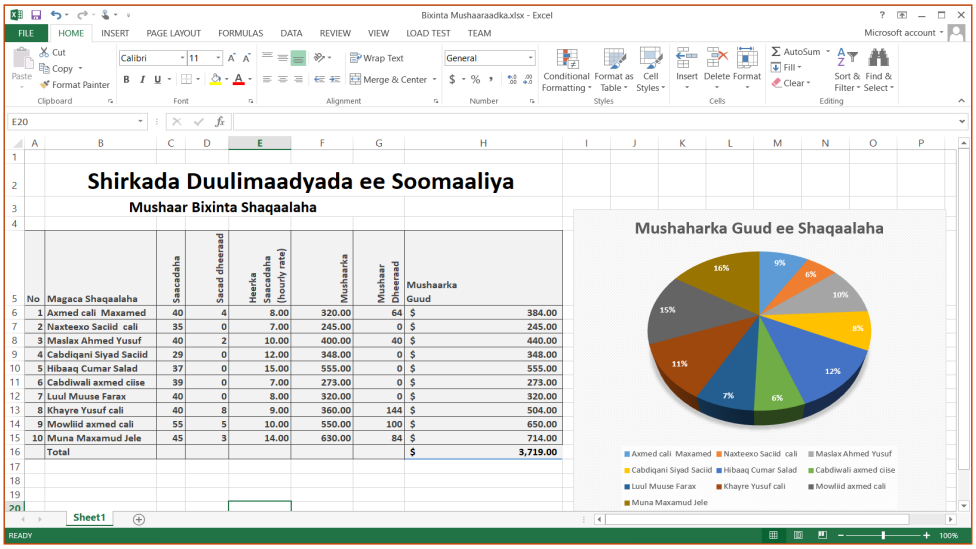


Waa maxay waxtarka loo adeegsado barnaamijka Excel 2013:

Barnaajimka Excel waxa uu leeyahay faa'iidooyin dhowr ah sida:

1. **Gelinta xog sax ah:** Iyada oo la adeegsanayo 'Excel', waxaad ku gelin kartaa macluumaadka si dhakhso leh oo ka saxsan qalinka iyo warqadda.
2. **Dib u xisaabinta xogta si fudud:** saxidda khaladaadka xagga qoraalka ama cusboonaysiinta xogta waa ku fududahay Excel-ka. Tusaalaha mushahar bixinta, haddii aad hesho saacado cusub oo loogu talagalay shaqaale, waxaad galinaysaa saacadaha cusub, Excel-na dib ayuu u xisaabinayaa mushaharka. Tusaalaha ku shubida natiijada imtixaanka ardayga, haddii aad hesho dhibco maaddo markii hore wax laga khalday, waxaad dib u galin kartaa natiijada saxda ah, Excel-ka dib ayuu u xisaabinayaa wadarta iyo celceliska ardayga.
3. **Habaynta iyo qaabaynta** muuqaalka xaashi-hawleedka (worksheet).
4. **Abuuridda jaantusyo** (charts) qurux badan.
5. **La wadaagista** xogta hal qof ama dadka badan.
6. Ku shaqaynta howlo horay loo soo qabtay.

Tusaalaha Xaashi-hawleedka (Worsheet) ee shaxda ku jirta.



Shirkada Duulimaadyada ee Soomaaliya

Mushaar Bixinta Shaqaalaha

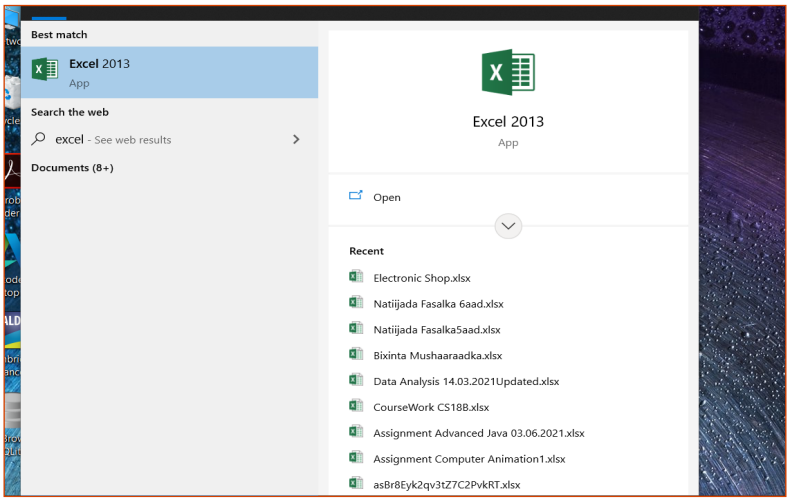
No	Magaca Shaqaalaha	Saacadaha	Sacad dheeraad	Heerka Saacadaha (hourly rate)	Mushaarka	Mushaar Dheeraad	Mushaarka Guud
1	Axmed cali Maxamed	40	4	8.00	320.00	64	$ 384.00
2	Naxteexo Saciid cali	35	0	7.00	245.00	0	$ 245.00
3	Maslax Ahmed Yusuf	40	2	10.00	400.00	40	$ 440.00
4	Cabdiqani Siyad Saciid	29	0	12.00	348.00	0	$ 348.00
5	Hibaaq Cumar Salad	37	0	15.00	555.00	0	$ 555.00
6	Cabdiwali axmed ciise	39	0	7.00	273.00	0	$ 273.00
7	Luul Muuse Farax	40	0	8.00	320.00	0	$ 320.00
8	Khayre Yusuf cali	40	8	9.00	360.00	144	$ 504.00
9	Mowliid axmed cali	55	5	10.00	550.00	100	$ 650.00
10	Muna Maxamud Jele	45	3	14.00	630.00	84	$ 714.00
	Total						$ 3,719.00

Waxqabadka 1aad:

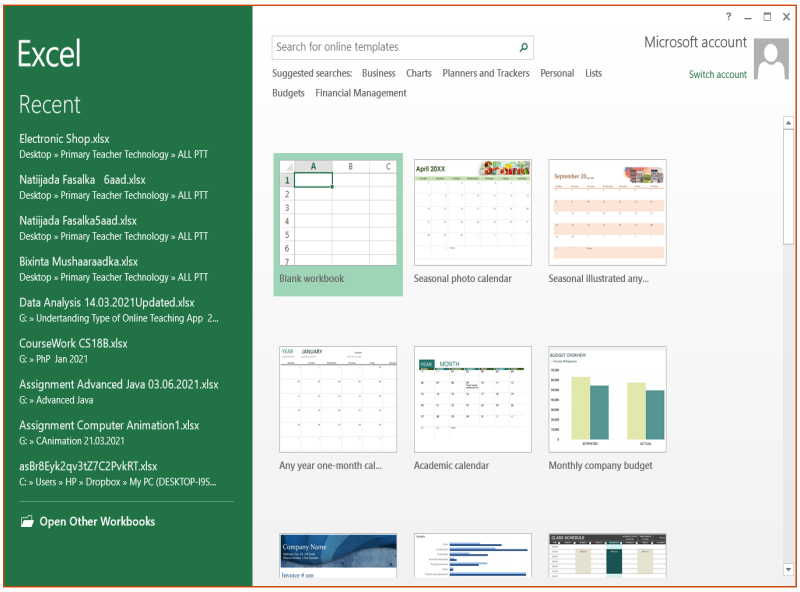
Sawirka hoose waxaa kaaga muuqanaya unugga ugu danbeeya (Last Cell) barnaamijka Excel 2013. Hadaba raac talaabooyinka hoos ku xusan si aad u gaarto unugga u danbeeya daaqada barnaamijka Excelka 2013.

Talaabooyinka

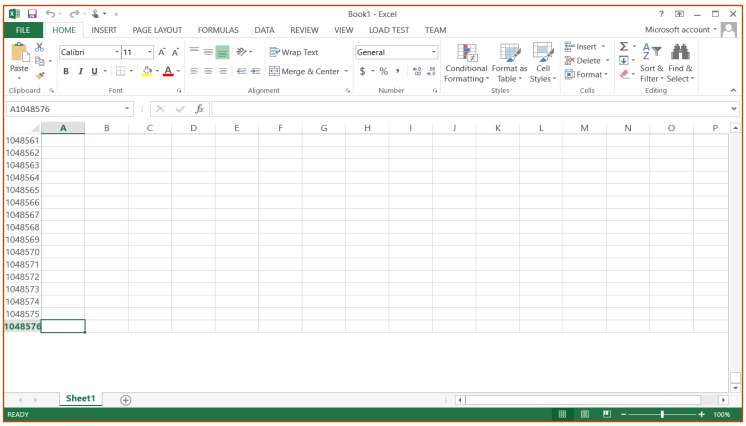
1. Bilaaw barnaamijka Excel 2013. Adigoo ku qoraya qaybta raadinta window-ga. Guji astaanka Excel 2013.



2. Guji bog-hawleed maran (blank workbook),



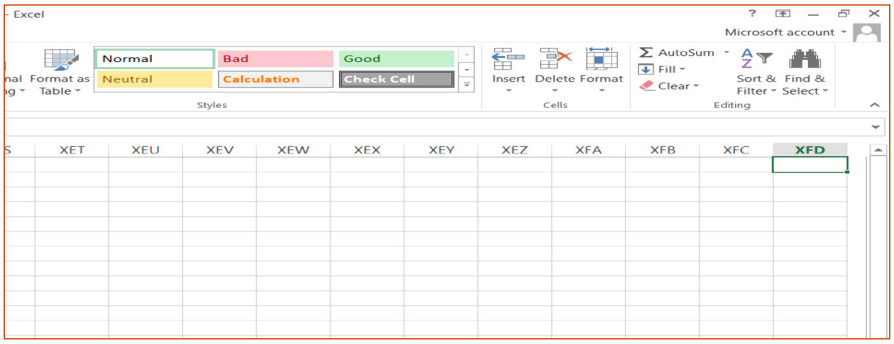
3. Adigoo jooga unugga (cell) koowaad ee Excel A1, hal mar isla qabo furayaasha kal ah: Ctrl + Down Arrow (↓). Si aad ugu laabato unugga (cell) A1, mar kale isla qabo furuyaasha kal ah: Ctrl + Up Arrow (↑).



Waxqabadka 2aad:

Waxa aad tagataa unugga ugu dambeeya jiif-taxa 1aad adigoo raacayaa tallaabooyinka is xiga ee hoose.

Sawirka hoose waxa uu muujinayaa unugga (cell) ugu danbeeyo ee jiif-taxa kowaad (row 1). Waxa aana ku calaamadaysan XFD1 taasoo ah taxanaha xarfaha Alfabetada (Alphabet) Ingiriiska sida XFD iyo tiro gadaal ka raacsan sida 1. Hal mar riix furayaasha kal ah: Ctrl + Right Arrow (→). Waxa ayna ku xiran tahay halka aad ka joogto daaqada barnaamijka Excel-ka ee ku horyaala.

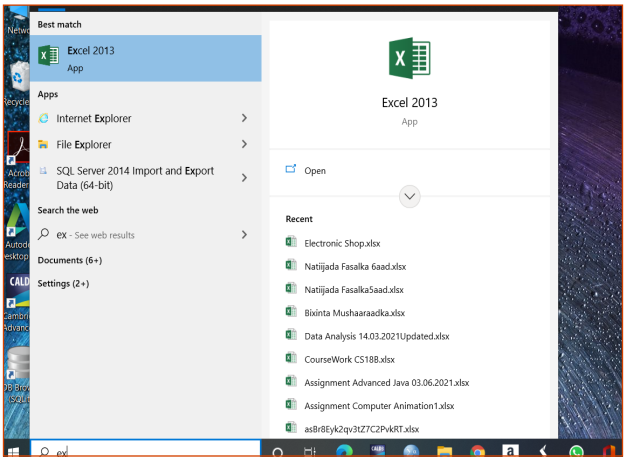


Sameeynta Xaashi-hawleed iyo Gelinta Xogta

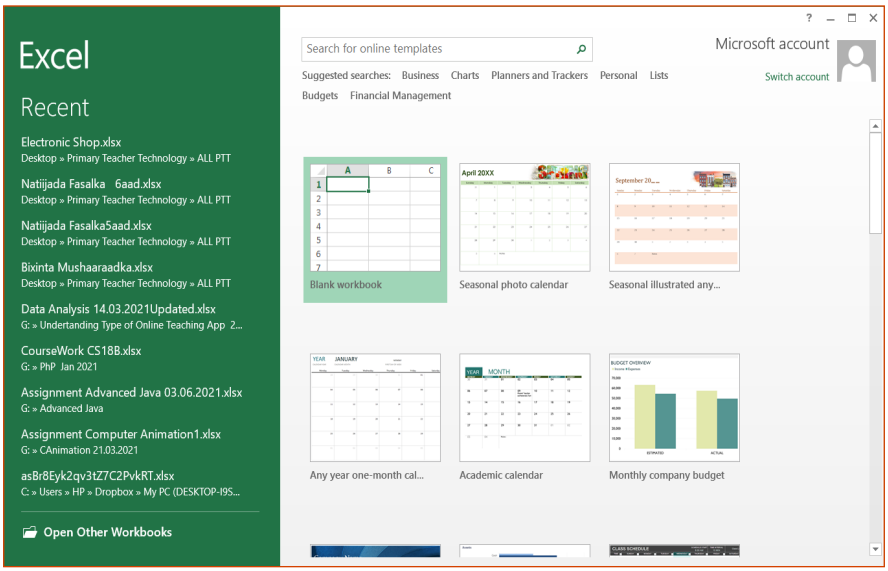
Barnaajimka Excel waxa uu ka mid yahay barnaamijyada muhiim ah. Sida wax loo xisaabiyo, soo bandhigida shaxda kal duwan, jadwal (table), sanduuq qoraal (text box), adeegsiga farshaxahan casriga ah (SmartArt). Raac talaabooyinka hoose sida aad u sameeyso xogna aad u geliso barnaamijka Excel.

Talaabooyinka:

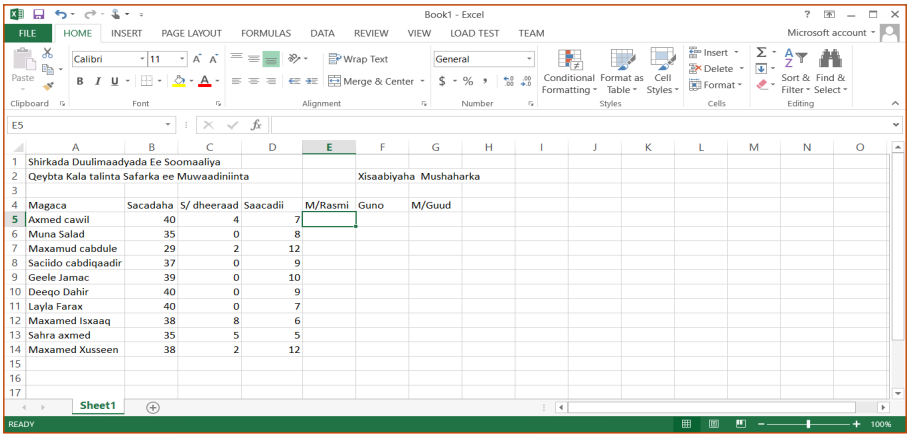
1. Guji qaybta raadinta ee barnaamijka daaqadada gaar ahaan bar-hawleedka(taskbar) sida sawirka hoose



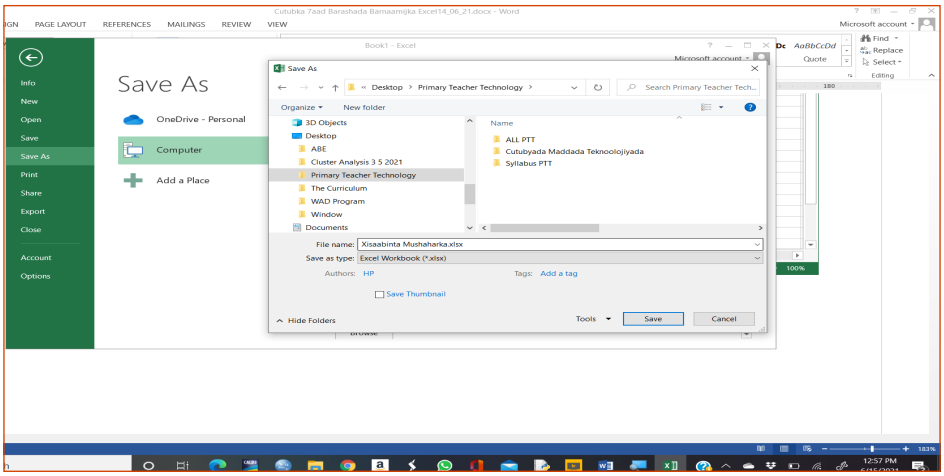
2. Guji astaanta barnaamijka Excel, guji buug-hawleedka maran (blank workbook) waxaa kuu soo baxaya sawirka oo kale.



3. Hadda waxaa kuu muuqanaya daaqada excelka, kadib waxaa gelisaa xogta kaaga muuqata daaqada Excel ee sawirka hoose.



4. U kaydi qaabka gaaban (shortcut) adigoo riixaya furayaasha kal ah **Ctrl + S.** meelay faylka sida sawirka hoose kaaga muuqata una bixi faylka magaciisa "**Xisaabinta Mushaharka.xlsx**". Gaar ahaan faylka hadda waxaa lagu keydiyay galka magaciisu yahay "Primary Teacher Technology"



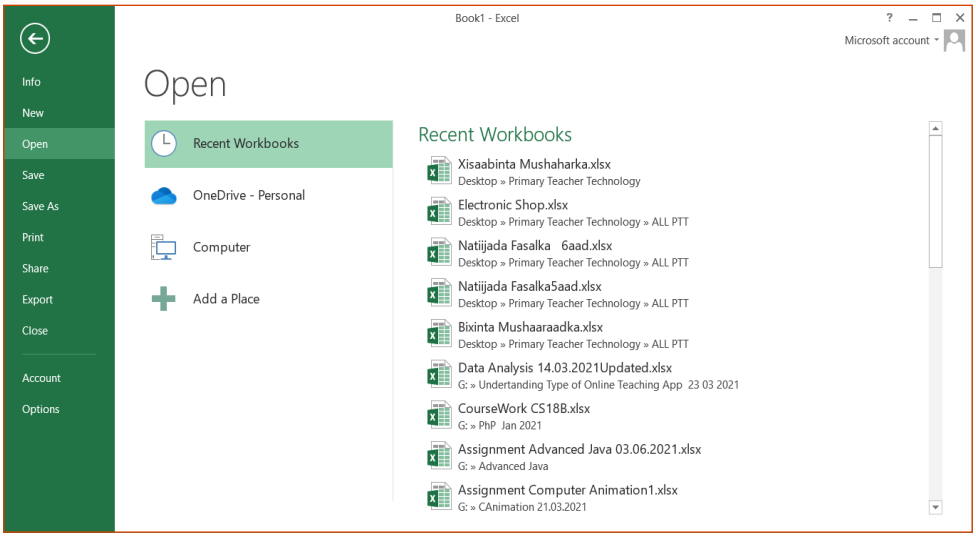
5. Guji badhanka "Save".
6. Guji astaanta ee dhanka midig daaqadada Excel.

Dulmarka Guud Aasaasiyada Ms – Excel 2013 (Touring the Excel 2013 Window).

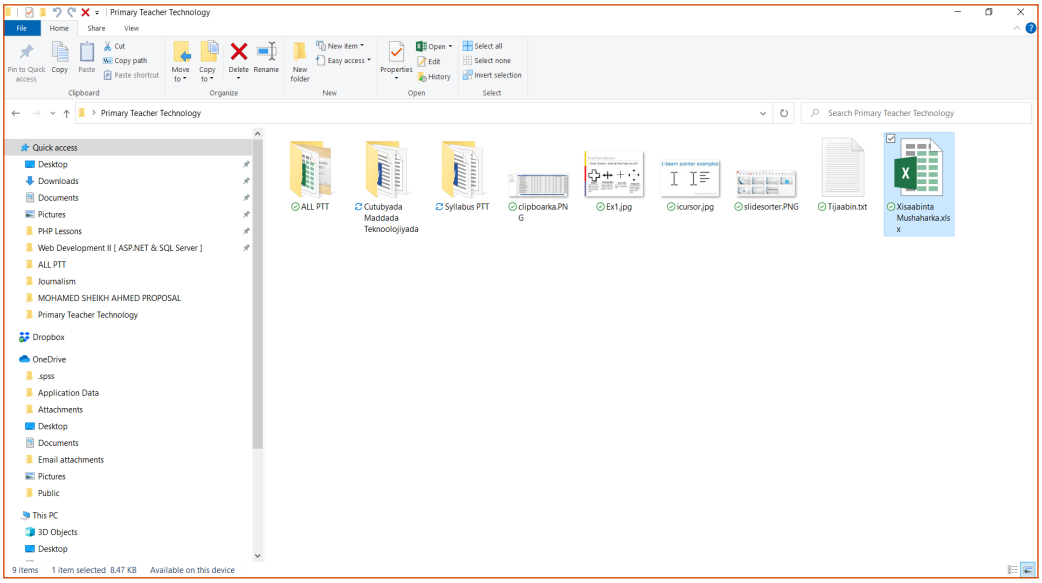
Si la mid ah bilaabista barnaamij kasta ee Xafiiska, waxaad isticmaali kartaa badhanka bilaabida(Start) ee daaqadada bar-hawleedka(Window taskbar), ama waxaad ku heli kartaa barnaamijkii oo gaaban (Shortcut) oo dulsaaran shaaxada (desktop) kombiyuutarkaaga oo aad doorbideyso inaad isticmaasho. Haddii waxaad u baahan tahay caawimaad dheeri ah, weydii macalinkaaga ama qofka ku caawinaya xagga farsamada. Raac talaabooyinka hoos ku xusan si aad u hesho daaqada barnaamijka Excelka oo dhammaystiran.

Talaabooyinka

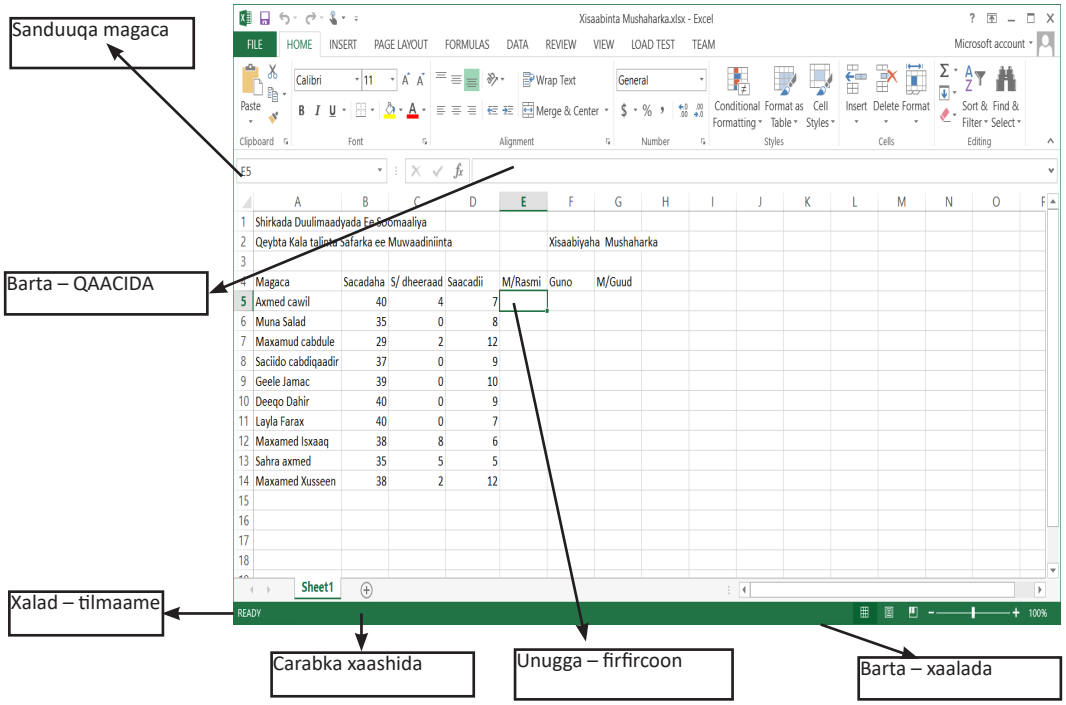
1. Bilaw barnamijka Excel, Guji carabka **File**, Guji buug-hawleedka maran(blank workbook), kadib Guji **Fur** (Open)
2. Sanduuqa Furida **u gudub cajalada (drive)** **ama galka** aad ku kaydiso Faylashaada Xogta ah. Guji "**Xisaabinta Mushahark.xlsx**" ee ka muuqda buug-hawleedkii dhawaanahan la sameeyay (Recent Workbooks) ama ka raadi halka aad kaga keydisay kombiyuutarkaaga.



3. Ama aad halka faylka kaga keedisay kombiyuutarkaaga adigoo labo jeer gujinaya faylka dushiisa sida sawirka hoose ka muuqata.



Sawirka hoose waxaa kaaga muuqanaya waxyaabaha dul saaran daaqadda barnamijka Excel 2013.



1. Sanduuqa Magaca (**Name box**) ayaa soo bandhigaya unugga (cell) xaashi-hawleedka (worksheet) ee markaas la taagan yahay sida midka hadda ka muuqda **E5**.
2. Barta-qaaciddada (**formula bar**) ayaa kuu oggolaanaya inaad geliso ama aad wax ka beddesho xogta ku jirta xaashi-hawleedka (**Worksheet**).
3. Unugga (**cell**) waa halka ay iska jaraan jiif - taxa (**row**) iyo joog - taxa (**column**) ee xaashi-hawleedka (**Worksheet**).
4. Unugg(cell) kasta waxa uu leeyahay goob u gaar ah loo yaqaan cinwaanka unugga (**cell address**) Unug walba waxa uu leeyahay astaan lagu garta sida (**B11**)
5. Unugga aad ku shaqaynayso waxa loo yaqaan unugga(Cell) firfircoon (**active cell**)
6. Carrabka warqadda (**Sheet tab**) waxa uu kuu oggolaanayaa inaad ka wareegtid xaashi una wareegtid xaashi kale gudaha buug-hawleedka (**Workbook**).

7. Barta - xaalada (**status bar**) ayaa kaa siinaaya warbixin kooban amarka taagan ama hawsha socota.
8. Tilmaamaha qaabka (**Mode indicator**) waxa uu bixiyaa macluumaad dheeraad ah sida marka unugga (cell) diyaar uu u yahay ij wax lagu qoro ama markii ay wax ku qoranyihiin.
9. Xulashada labo unug (cells) ama kabadan sida **C6: C15** waxaa loo yaqaan baaxada (**range).**

Waxqabadka 3aad:

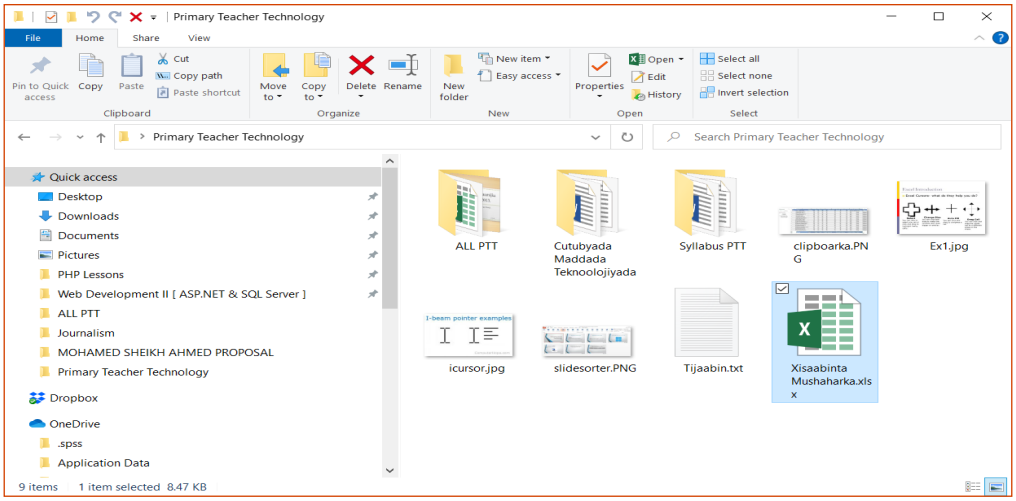
Bare-arday qor waxyaabaha hoos yimada carabka **formulas**

Fahamka Qaaciddada (Understanding Formulas)

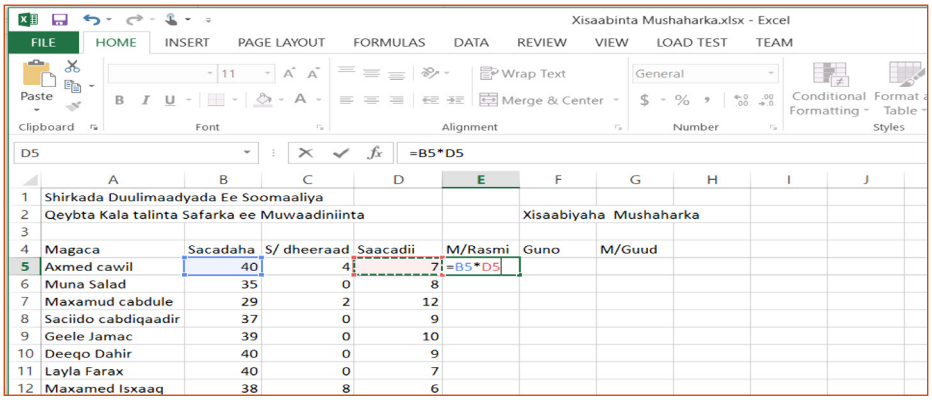
Qaaciidooyinka: waa isla'egyo ku jira xaashi-hawleedka (**Worksheet**). Qaaciddada 'Excel' waxa ay u oggolaanaysaa isticmaalayaasha heer kasta oo khibrad xisaabeedkoodu la eg yahay in ay sameeyaan xisaabinta ay u baahan yihiin.

Tusaale: waxa aan xisaabinaynaa xisaabinta mushaharka shaqaalaha. Raac tallaabooyinka isxiga ee soo socda si aad u soo saarto msuharka shaqaale lagu salaynaayo saacadaha uu qofwalbaa shaqeeyay

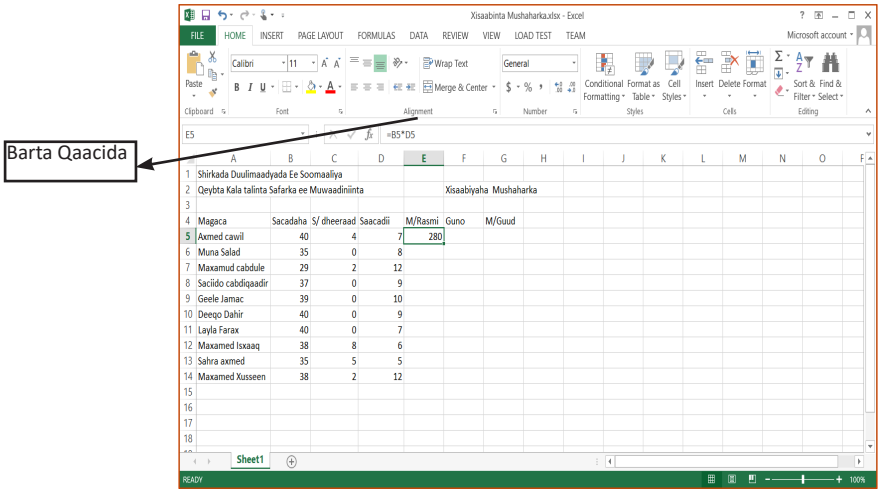
1. Dooro halka uu kuu yaalo faylka ee gudaha kombiyuutarka labo jeer guji "**Xisaabinta Mushahark.xlsx**. Sida ka muuqata sawirka hoose.



2. Guji unugga (cell) **E5** kadib ku bilaw calaamadda la'eg, si aad u xisaabiso mushaharka qofka shaqalaha. Guji unugga (cell) B5, qor calaamada ku dhufashada (*) kadib Guji C5 sida =B5*D5. Fiiri sawirka hoose



3. Riix furaha [Enter-ka] si aad u heshid maxsuulka isku dhufasha qiimayaasha ku kala jira unugg-yada (cells), B5 iyo D5.



4. Hal mar riix furayaasha **Ctrl + S** si aad u keydiso.

Markii aad Xisaab ku Qoreysid Barnaamijka Excel waxa muhiim in aad:

- Ogaatid halka ay qaaciidooyinka ku habboon yihiin in lagu qoro
- Si sax ah u ogow nooca unugga (cell) iyo xisaabta loo baahan yahay.

- Abuur qaaciddo adigoo hubinaaya saxnimadeeda iyo ku haboonaashaheeda
- Adeegso tixraacyada unugyada (cell references) halkii aad ka qiimeyn lahayd.
- Go'aami xisaabinta loo baahan doono.

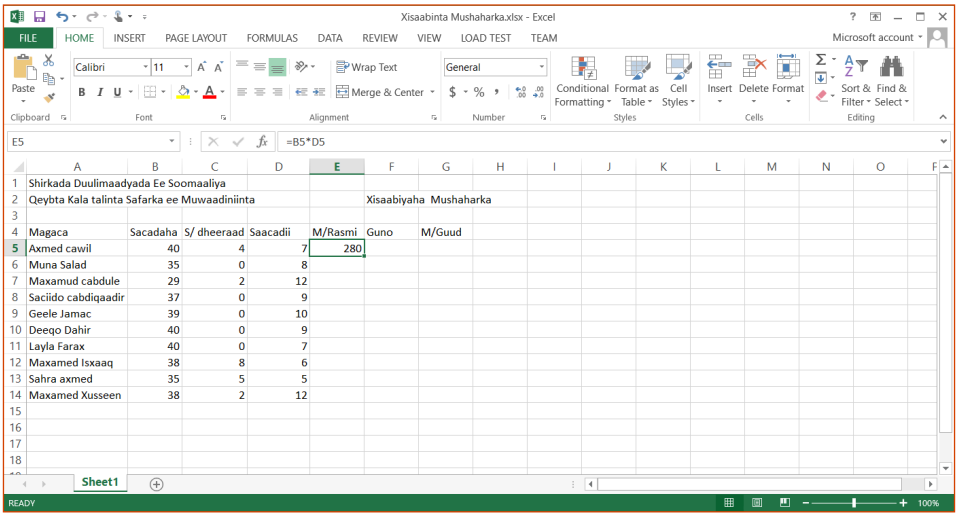
Astaan xisaabeed (Arithmetic Operators)

Jadwalkaan hoose waxa aan ku baraneynaa calaamaha loo yaqaano astaan xisaabeed (arithmetic operators) sida ku-darta (+), ka-jarta (-), ku-dhufashada (*), u-qaybinta (/), boqoleyda (%) iyo Jibaarada (^)

Astaanta	Ujeedka	Tusaale
+	(Ku-darid (addition	B5+B7=
-	(Ka-jarid (subtraction	B5 -10=
*	Ku-dhufasho (multipli-(cation	B5*B7=
/	(U-qeybin (division	B5/B7=
%	(Boqoley (percent	45%=
^	(Jibaarid (exponent	(la mid ah 7^2)2^7=

Gelitaanka sumadaha (labels), Qiimaha (Values) iyo Isticmaalka badhanka Wadarta (Sum button)

Qiimayaashu (**Values**) waxa ay noqon karaan Nambarro, qaacidooyin, iyo fansaarro (functions) loo isticmaali karo xisaabin. Sida ka muuqata sawirka hoose. Tusaale lambarka **40** ee ku jira Unugga (cell) **B5**. Qiimaha qaacida oo ah **=B5*D5** ee ku jira unugga (cell) **E5.** Fansaarku (**function**) waa qaacido horey loogu soo diyaariyay barnaamijka Excelka, fansaarku (**function**) waxa uu leeyahay cabbiraadaha (arguments) iyo macluumaad lagama maarmaan u ah xisaabinta. Tusaale ahaan **fansaarka** waxa uu noqon karaa: =SUM (B5:B15).



Qaacida Xisaabeed Barnaamijka Excel

Qaaciddada waxa ay ku bilaabataa calaamadda la'eg (=), sidoo kale waxaa loo yaqaanaa horgalaha Qaacidada (formula prefix).

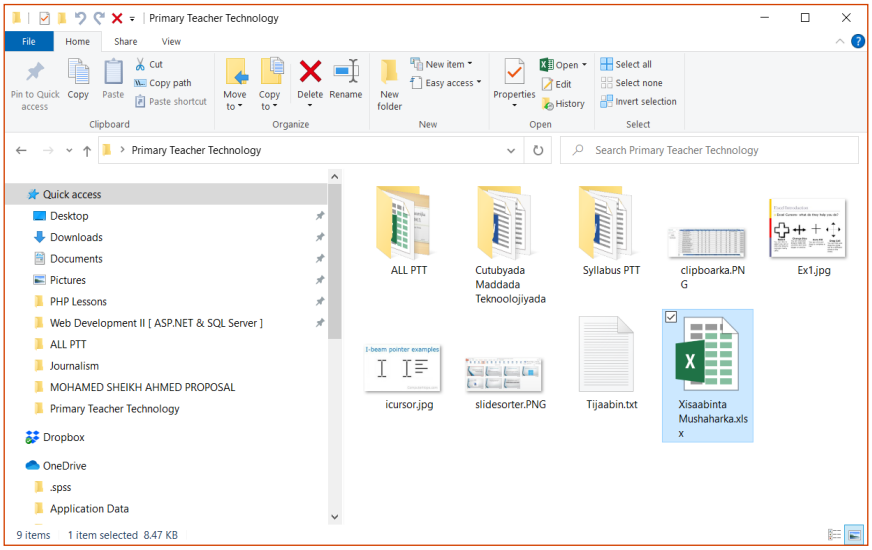
Waxaa jirta afar qaab oo wax loo xisaabiyo marka la joogo xaashi-hawleedka (Worksheet).

- Calaamadaha xisaabinta (**arithmetic operators**) waxaa ka mid calaamadaha sida: isku darka iyo kal jarista: tusaale ahaan: + , -, * , / , % iyo ^
- Calaamadaha isbarbardhigga (**comparison operators**): Waa calaamado loo adeegsado in lays barbar dhigo xisaab taas oo ula jeedku yahay in la helo natiija ah run ama been ah. Tusaale caalamadaha is bar bar dhiga waxaa ka mid ah:
- La'eg (=), ka-wayn (>), ka-yar (<), ka-wayn ama la'eg(>=), ka yar ama la'eg(<=), an isla'ekeen(<>).
- Calaamada isku dhajinta qoraalka (**Text concatenation operators**) : si aad isku dhajiso qoraalo ku kala jira unugyo(cells) ka duwan isticmaala caalamada ah (&)
- Caalamada tixraacyada (**Reference operators**): tulaase caalamadaha tixraacyada waxaa ka mid ah (space).

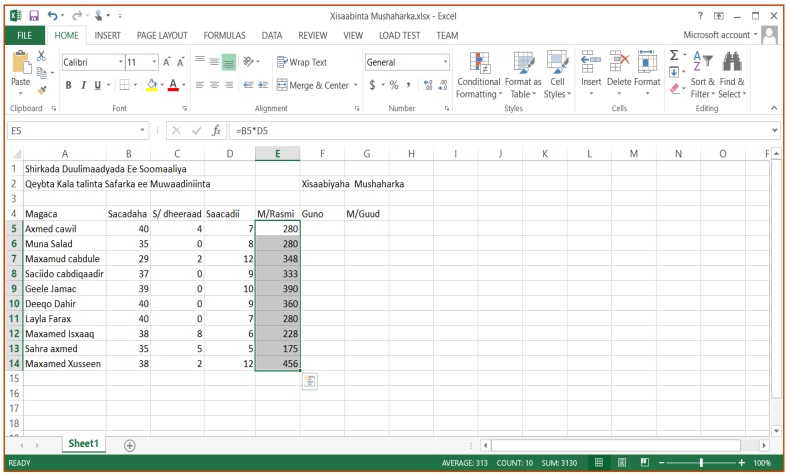
Xisaabinta Wadarta

Ciwaankaan waxa aan ku baran doonaa sida loo xisaayo wadatar iyo in aan ku koobiyeyno unugg-yada (cells) kale. Waxa aan kaloo ku baran doonaa xisaabinta gunnada shaqaalaha iyo wadarta guud. Raac talaabooyinka hoose.

1. Aad halka uu kuu yaalo faylka ee gudaha kombiyuutarka labo jeer guji "**Xisaabinta Mushahark.xlsx**. Sida ka muuqata sawirka hoose.

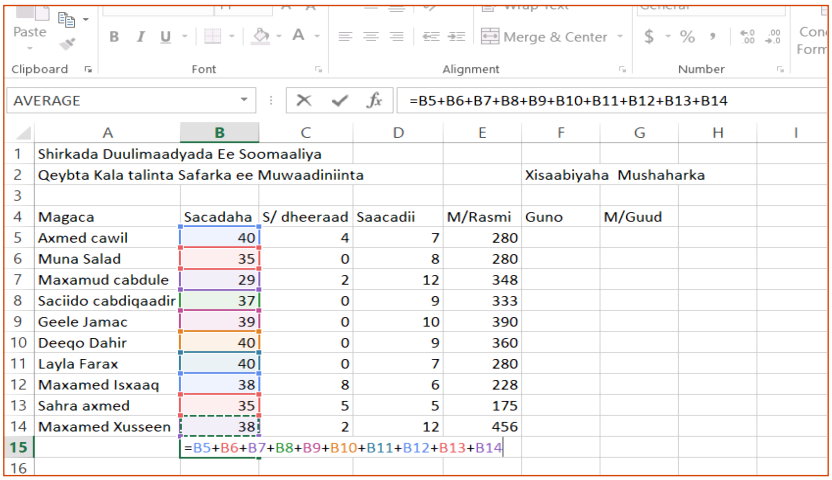


2. Guji unugga (cell) **E5** kadib ku koobiyey unugg-yada (cells) ee ka hooseya adigoo jiidaya hagaha mouse-ka. . Sida sawirka ka muuqanayso.



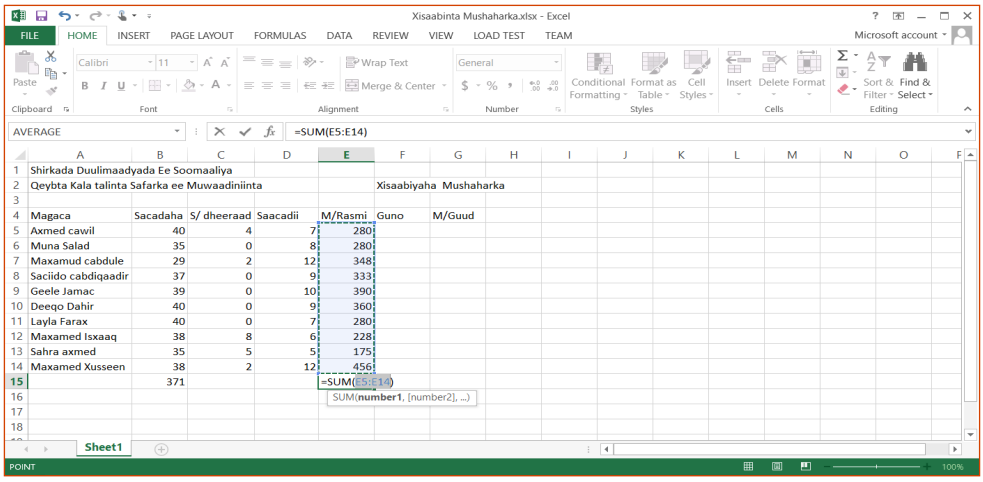
3. Waxaa jirka labo qaab oo loo xisaabiyo wadarta tirtiro ku jirta unugg-yo(cells) ee daaqada Excel-ka.

4. Guji unugga (cell) **B15**. Ku bilaaw calaamada la'eg (=) kadib, guji unugga (cell) B5 qor calaamada ku-darida (+), Guji **B6.** Kadib qor calaamada ku-darida(+) sidaa ku wad ilaa aad ka soo gaartid unugga(cell) **B14**. Sid kaaga muuqata sawirka hoose.

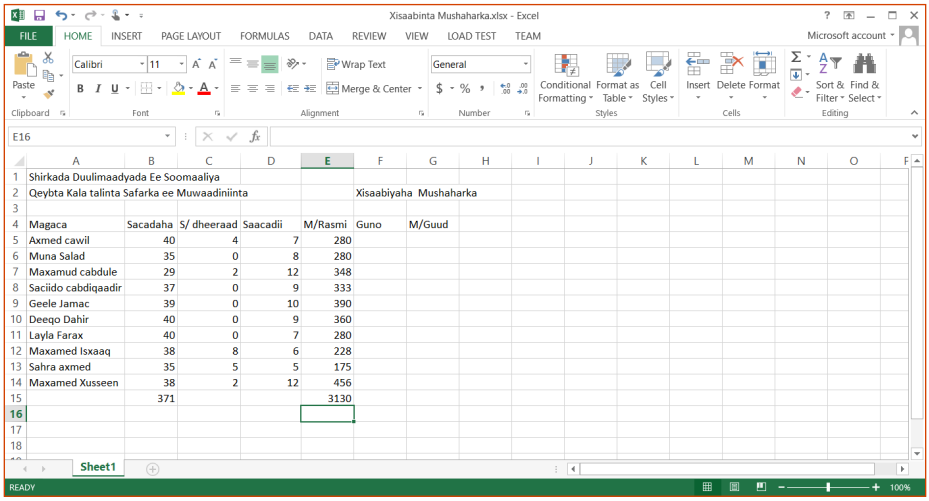


5. Riiix furaha [Enter] sida aad u hesho maxsuulka ka soo baxay.

Guji unugga (cell) E15. 7. Guji badhanka Wadarta ee ku jira carabka **Home** kooxda tafatirka (group editing.) sida kaaga muuqanayso sawirka hoose.

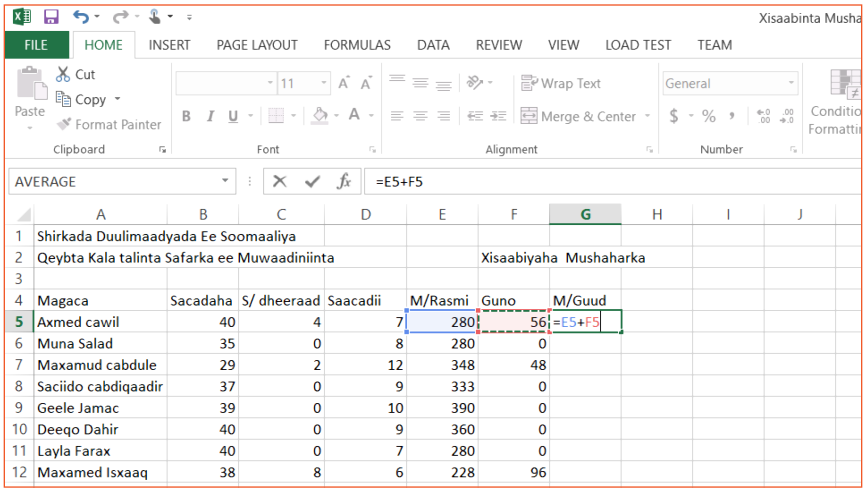


6. Riix furaha [Enter] si aad u hesho maxsuulka waxaa sida sawirka ka muuqanaysa.



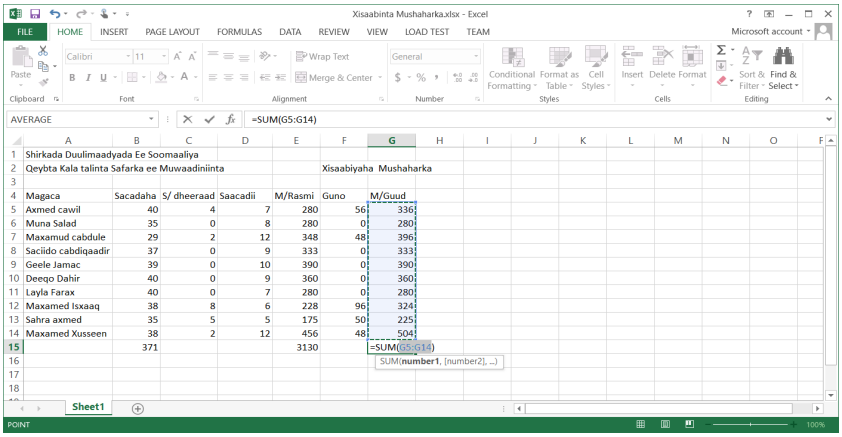
	A	B	C	D	E	F	G
1	Shirkada Duulimaadyada Ee Soomaaliya						
2	Qeybta Kala talinta Safarka ee Muwaadiniinta					Xisaabiyaha Mushaharka	
3							
4	Magaca	Sacadaha	S/ dheeraad	Saacadii	M/Rasmi	Guno	M/Guud
5	Axmed cawil	40	4	7	280		
6	Muna Salad	35	0	8	280		
7	Maxamud cabdule	29	2	12	348		
8	Saciido cabdiqaadir	37	0	9	333		
9	Geele Jamac	39	0	10	390		
10	Deeqo Dahir	40	0	9	360		
11	Layla Farax	40	0	7	280		
12	Maxamed Isxaaq	38	8	6	228		
13	Sahra axmed	35	5	5	175		
14	Maxamed Xusseen	38	2	12	456		
15		371			3130		
16							
17							
18							

7. Guji unugga (cell) **F5**. Qor calaamda la'eg (=), guji unugga (cell) **C5** qor calaamada ku-dhufashada * qor 2 qor calaamada ku-dhufashada * Guji unugga (cell) **D5**. Sida = C5*2*D5. Riix furaha [Enter]. Sida sawirka hoose ka muuqata.

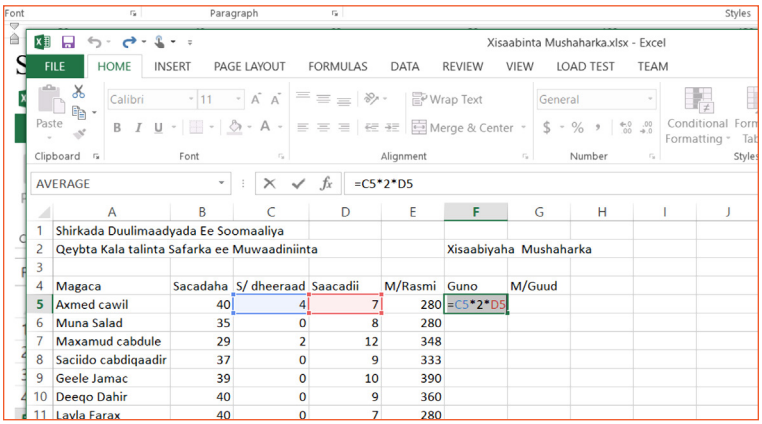


	A	B	C	D	E	F	G
1	Shirkada Duulimaadyada Ee Soomaaliya						
2	Qeybta Kala talinta Safarka ee Muwaadiniinta					Xisaabiyaha Mushaharka	
3							
4	Magaca	Sacadaha	S/ dheeraad	Saacadii	M/Rasmi	Guno	M/Guud
5	Axmed cawil	40	4	7	280	56	=E5+F5
6	Muna Salad	35	0	8	280	0	
7	Maxamud cabdule	29	2	12	348	48	
8	Saciido cabdiqaadir	37	0	9	333	0	
9	Geele Jamac	39	0	10	390	0	
10	Deeqo Dahir	40	0	9	360	0	
11	Layla Farax	40	0	7	280	0	
12	Maxamed Isxaaq	38	8	6	228	96	

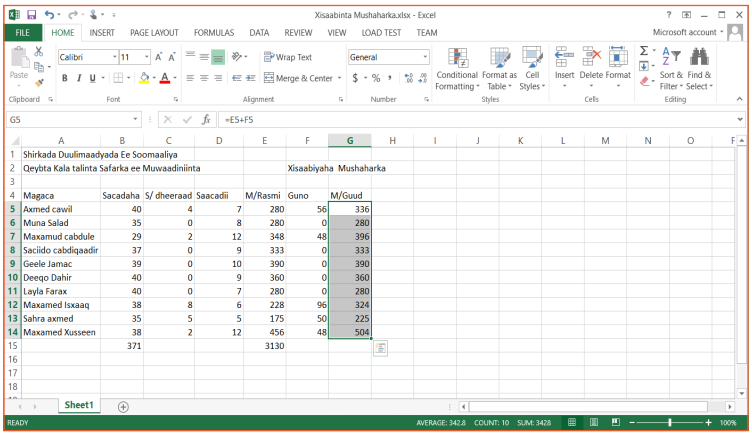
8. Guji unugga (cell) **F5.** Adigo isticmaalaya calaamada buuxinta gacanta (fill handle) hoos u jiid ilaa aad ka gaarto unugga (cell) **F15.** Kadib sii daa hagaha mouse-ka sida ka muuqata sawirka hoose.



9. Guji unugga (cell) **G5.** Kadib qor calaamada la'eg (=), guji E5 qor calaamda + guji **F5**. Sida ka muuqata sawirka hoose.



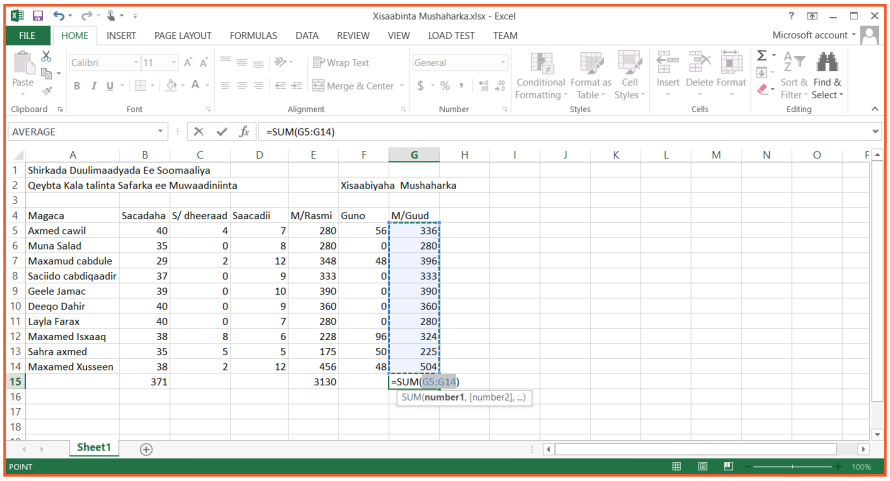
10. Riix furaha [Enter], kadib ku koobiyey unugg-yada (cells) adigoo ka bilaawaya unugga **G5** hoos u jiid ilaa aad ka gaarto unugga (cell) **G14.** Sida ka muuqata sawirka hoose.



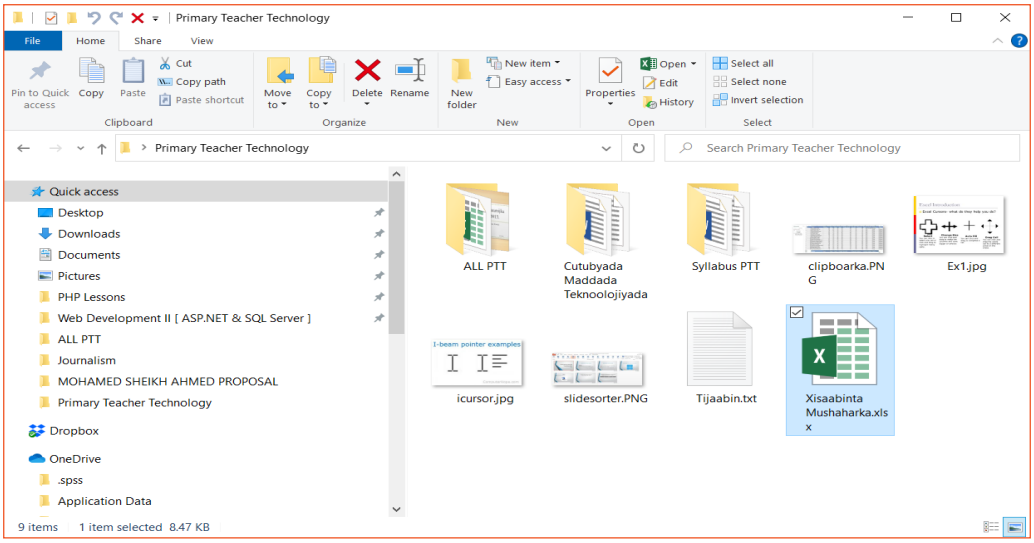
11. Riix furuha Ctrl + S si aad u kaydiso hawsha aad qabatay.

Waxqabadka 4aad:

Soo saar natiijada sawirka hoose, raac talaabooyinka ka hoose si aad u soo saartid natiijada lagaa dalbay



1. Aad halka uu ka yaallo faylka gudaha kombiyuutarka labo jeer guji "**Xisaabinta Mushahark.xlsx**. Sida ka muuqata sawirka hoose.

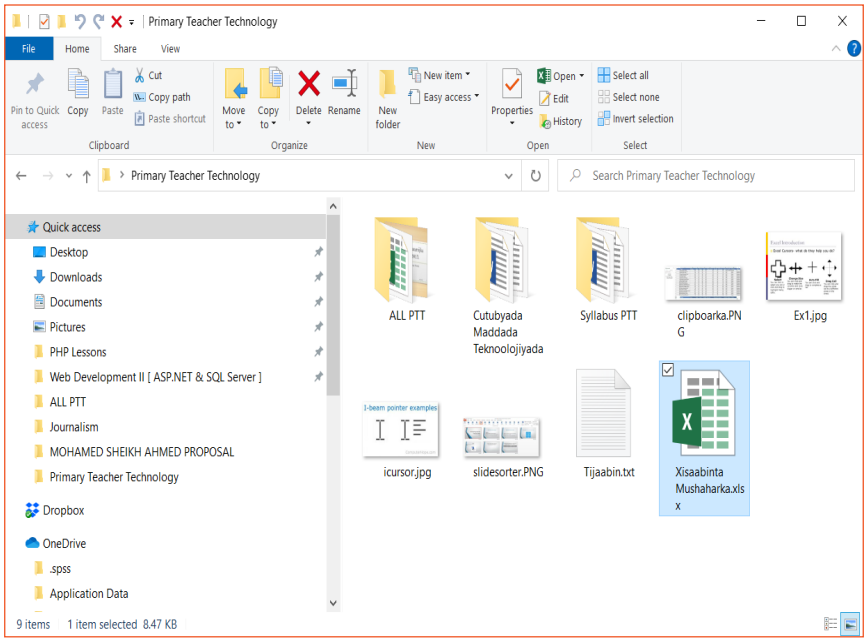


2. Guji unugga (cell) **G15** kadib guji Guji badhanka Wadarta ∑ ee ku jira carabka **Home** kooxda tafatirka (group editing.) sida kaaga muuqanayso sawirka kore.
3. Riix furaha [Enter] kadib Riix furuha **Ctrl + S.** si aad u keydiso hawsha aad qabatay

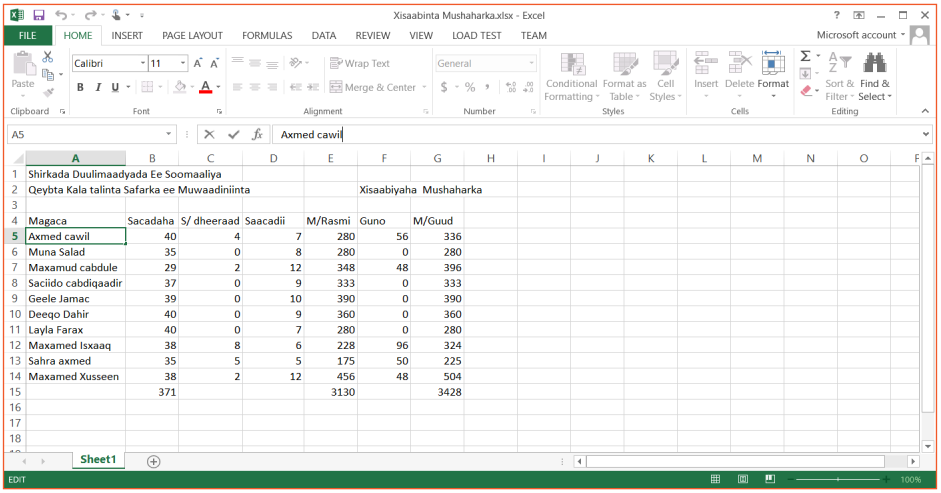
Tifatiridda (editing) Xogta ku Jirta Unug (Cell)

Waad baddeli kartaa (edit) qoraalka ku jira unug (cell) xilli walba oo aad doonto. Si aad u baddesho samee talaabooyinka soo socda:

1. Aad halka uu ka yaalo faylka gudaha kombiyuutarkaaga labo jeer guji "**Xisaabinta Mushahark.xlsx**. Sida ka muuqata sawirka hoose.



2. Guji unugga (cell) **A5** kadib Guji sanduuqa barta-qaacidada (formula bar)
3. bilaw in aad baddesho qoraalka. Sida ka muuqatada sawirka hoose.



	A	B	C	D	E	F	G
1	Shirkada Duulimaadyada Ee Soomaaliya						
2	Qeybta Kala talinta Safarka ee Muwaadiniinta					Xisaabiyaha	Mushaharka
3							
4	Magaca	Sacadaha	S/ dheeraad	Saacadii	M/Rasmi	Guno	M/Guud
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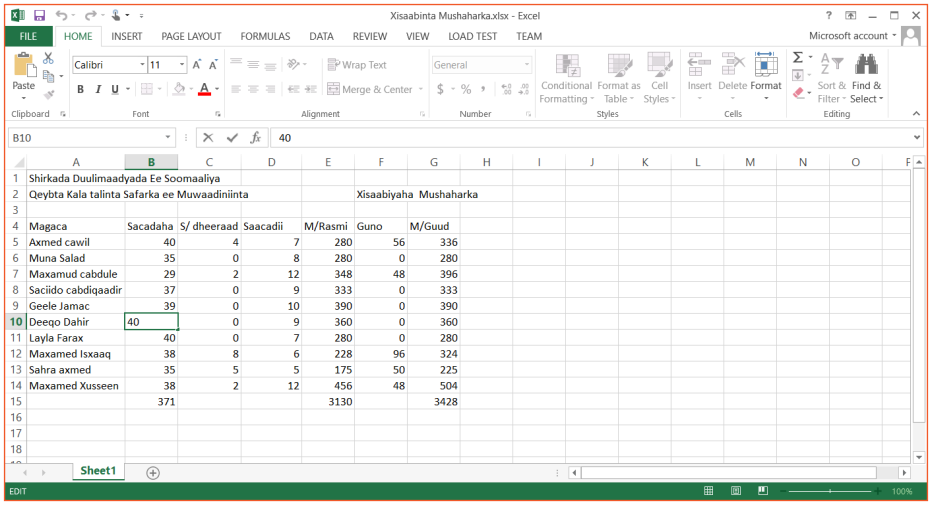
6	Muna Salad	35	0	8	280	0	280
7	Maxamud cabdule	29	2	12	348	48	396
8	Saciido cabdiqaadir	37	0	9	333	0	333
9	Geele Jamac	39	0	10	390	0	390
10	Deeqo Dahir	40	0	9	360	0	360
11	Layla Farax	40	0	7	280	0	280
12	Maxamed Isxaaq	38	8	6	228	96	324
13	Sahra axmed	35	5	5	175	50	225
14	Maxamed Xusseen	38	2	12	456	48	504
15		371			3130		3428

Waxqabadka 5aad:

Si ka muuqata sawirka hoose waxaad tafatiri kartaa unug (cell) walbo aad rabto. Raac talaabooyinka hoose aad u tafatirto (edit) unugga (cell) **B10**



	A	B	C	D	E	F	G
1	Shirkada Duulimaadyada Ee Soomaaliya						
2	Qeybta Kala talinta Safarka ee Muwaadiniinta					Xisaabiyaha	Mushaharka
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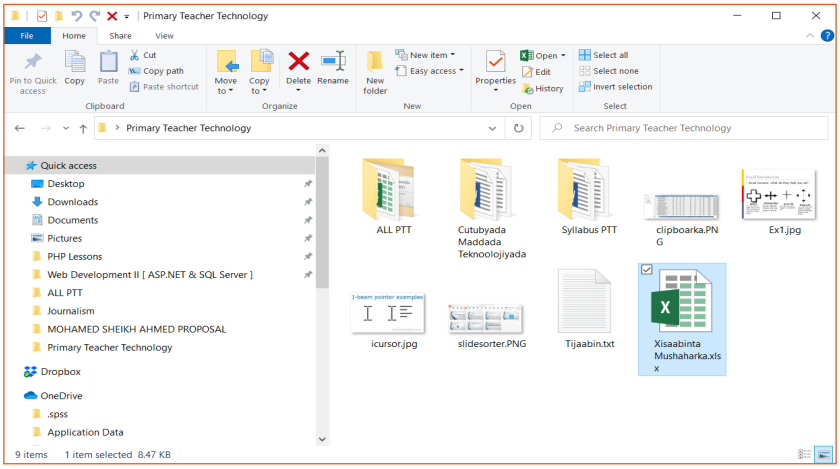
13	Sahra axmed	35	5	5	175	50	225
14	Maxamed Xusseen	38	2	12	456	48	504
15		371			3130		3428

1. Aad halka uu ka yaalo faylka gudaha kombiyuutarkaaga labo jeer guji "**Xisaabinta Mushahark.xlsx**. Sida ka muuqata sawirka hoose.



2. Guji unugga (cell) **B10** kadib Guji sanduuqa barta-qaacidada (formula bar),
3. bilaw in aad baddesho qoraalka. Sida ka muuqatada sawirka kore.

Waxqabadka 2aad:

Cilmi-baaris: raadi qaab kale ee loo tafatiri karo Unugga

Hagaha Guud ee Barnaajimka Excel

Jadwalkan hoose waxa aan ku baran doonaa sida hagaha (mouse-ka) u shaqaynaayo marka la joogo barnaamijka hoose.

Magace	Tilmaam	Adeegsiga
(Caadi ah (Normal	✥	Xulo unuga (cell) ama range; waxa ay muujineysaa qaab diyaar ah (Ready (Mode
(Koobiyeyn (Copy	+	Koobiyey unugyada (cells) oo dooran
I-beam	I	Tafatir (edit) waxyaabaha ku jira bar-(ka qaacida (formula bar
(Dhaqaajin (Move	✥	beddel goobta unugga(cell) la door-tay

Baddelaadda Muuqaalada Xaashi -hawleedka (Worksheet)

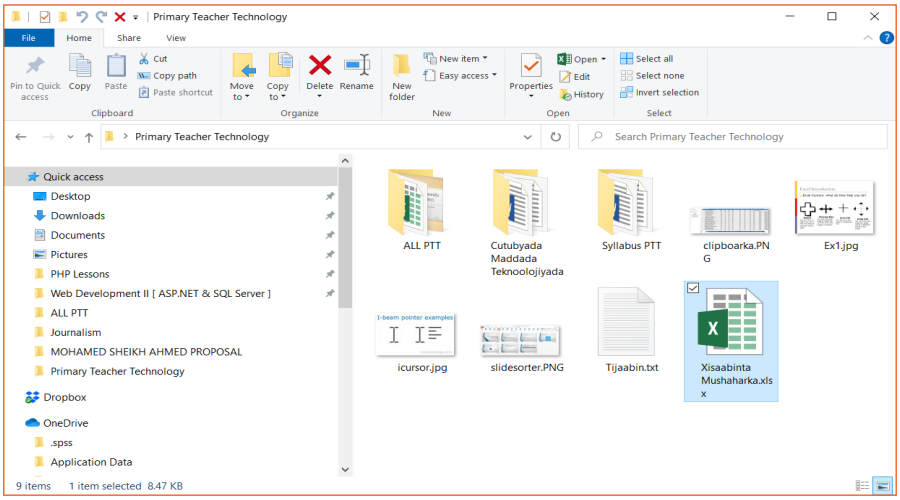
Barnaamijka Excelka waxaa ku jirta saddax muuqaalka (views) oo kal duwan oo kal ah:

1. Muuqaalka caadiga ah (**Normal View**)
2. Muuqaalka Bogga (**Page Layout View**)
3. Bogga kal qaybinta **(Page Break Preview)**

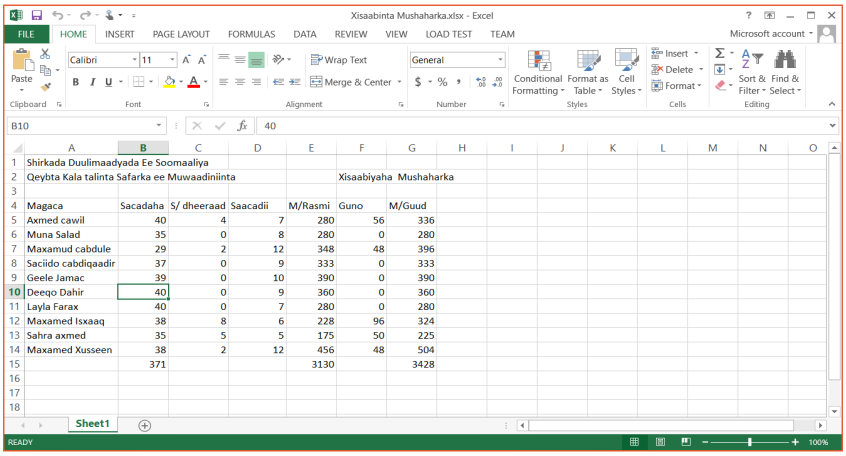
Waad beddeli kartaa Muuqaalada xaashi-hawleedka (Worksheet) adiga oo isticmaalaya labadaan qaab midkood:

- Carabka View ee ku jira Ribbon-ka
- Badhanada View ee dulsaaran barta - xaalada (**status bar**). Si aad u kala bedesho muuqaalada kala duwan ee barnaamijka Excel Raac talaabooyinka hoose ku xusan.

1. Aad halka uu ka yaalo faylka gudaha kombiyuutarkaaga labo jeer guji "**Xisaabinta Mushahark.xlsx**. Sida ka muuqata sawirka hoose.



2. Muuqaalka caadiga ah (**Normal View**): waxa uu muujinayaa xaashi-hawleedka (worksheet) iyadoo aan lagu darin qeybta kore (header) iyo qaybta hoose (footer) ama agabyada sida mastaradda iyo nambarka bogga. Sida sawirka hoose kaaga muuqanaya



	A	B	C	D	E	F	G
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8	Saciido cabdiqaadir	37	0	9	333	0	333
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10	Deeqo Dahir	40	0	9	360	0	360
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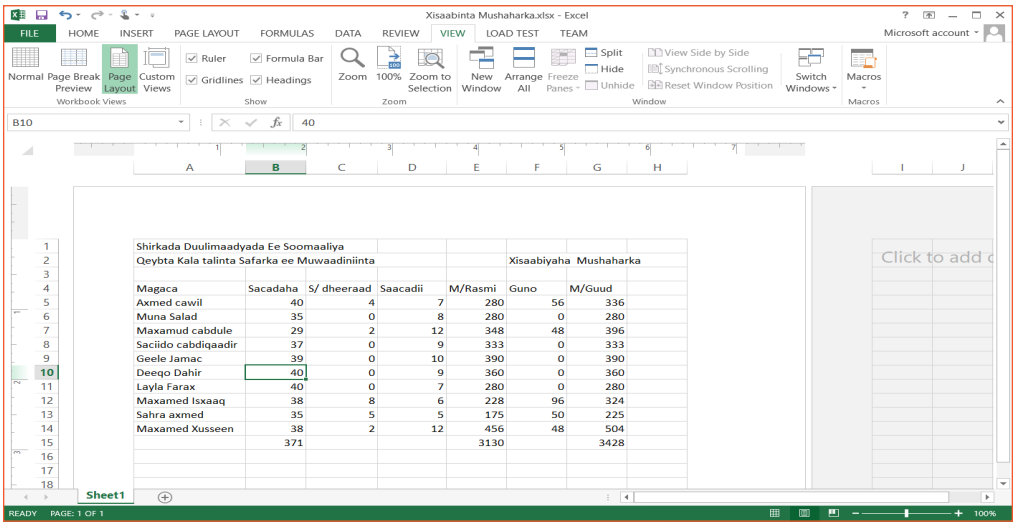
13	Sahra axmed	35	5	5	175	50	225
14	Maxamed Xusseen	38	2	12	456	48	504
15		371			3130		3428

3. Muuqaalka Bogga (**Page Layout View**) waa muuqaal sida saxda ah oo ka soo muuqan doona xaashi-hawleedka (Worksheet) marka la daabaco. Waxaa kale oo ka soo muuqan doona cabirka bogga (page margins), qaybta kore (header), qaybta hoose (footer) iyo masteradda.



	A	B	C	D	E	F	G
1	Shirkada Duulimaadyada Ee Soomaaliya						
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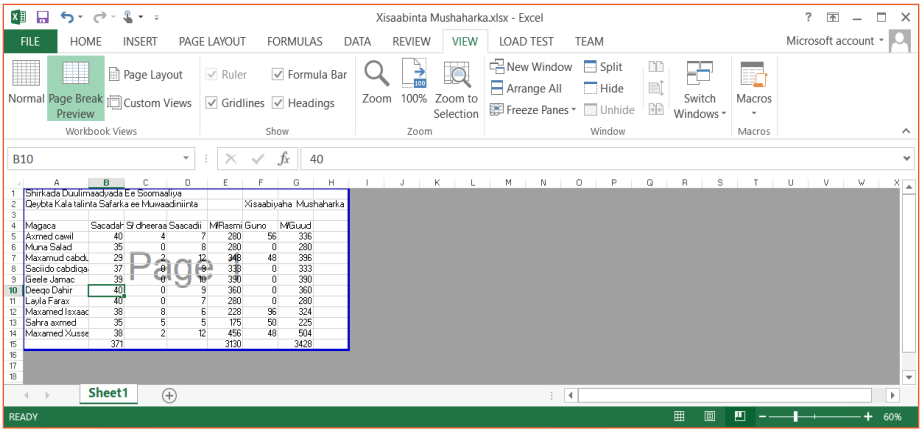
13	Sahra axmed	35	5	5	175	50	225
14	Maxamed Xusseen	38	2	12	456	48	504
15		371			3130		3428

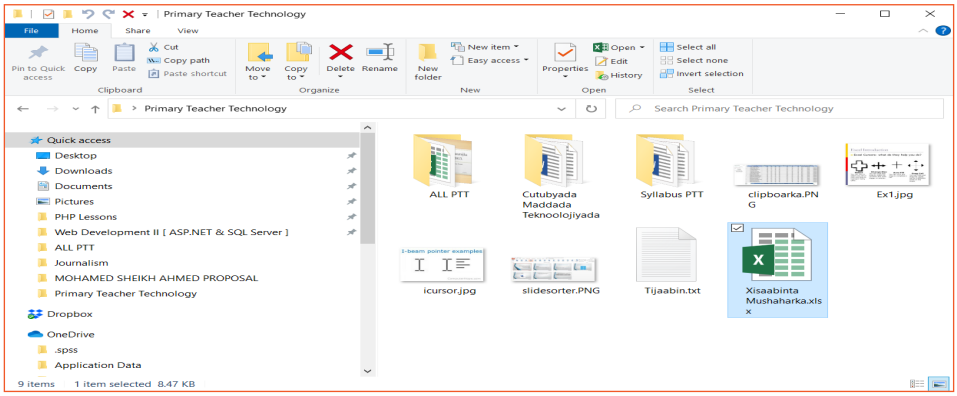
4. Bogga kal qaybinta **(Page Break Preview):** waa muuqaal isku soo aruurinayo boggaga kale ee xaashi-hawleedka**.** Fiiri sawirka hoose



Doorashada Ikhtiyaarrada Daabacaadda

Ka hor inta aadan daabacin waxa aad arki kartaa muuqaalka faylka aad daabici rabtid shaashadda ee Adeegsiga carabka **Page Layout.** Waxa uu kuu suurtagalinayaa in aad saxdo qaabka xaashi-hawleedka adigoo saxaya jahada xaashi-hawleedka (page orientation), cabirka xaashi-hawleedka iwm. Raac talaabooyinka hoose ku xusan si aad u aragto qaabka uu ku soo bixi doono xaashi-hawleedka aad daabaci rabto.

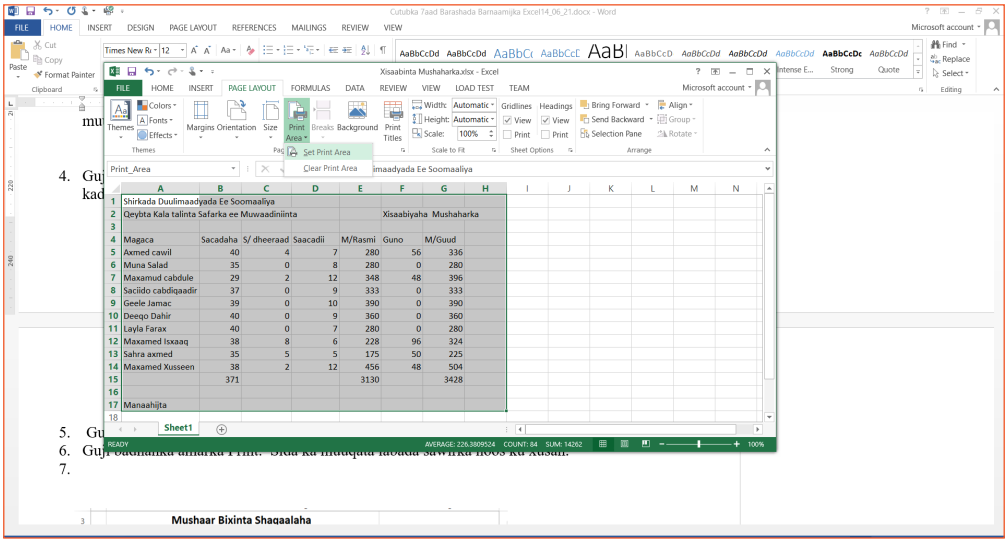
1. Aad halka uu ka yaalo faylka gudaha kombiyuutarkaaga, labo jeer guji "**Xisaabinta Mushahark.xlsx**. Sida ka muuqata sawirka hoose.



2. Guji unugga(cell) **A17** kadib ku qor magacaaga sida " **Manaaahijta**"

3. Guji carabka **Page Layout** ee Ribbonka. Mibadee (Highlight) inta aad rabto in aad daabacdo, guji carabka Page Layout, guji carabka **print area** kadib guji **set print** waxaad arki doona sadar dhibca leh taasoo ah qaybta la daabacayo

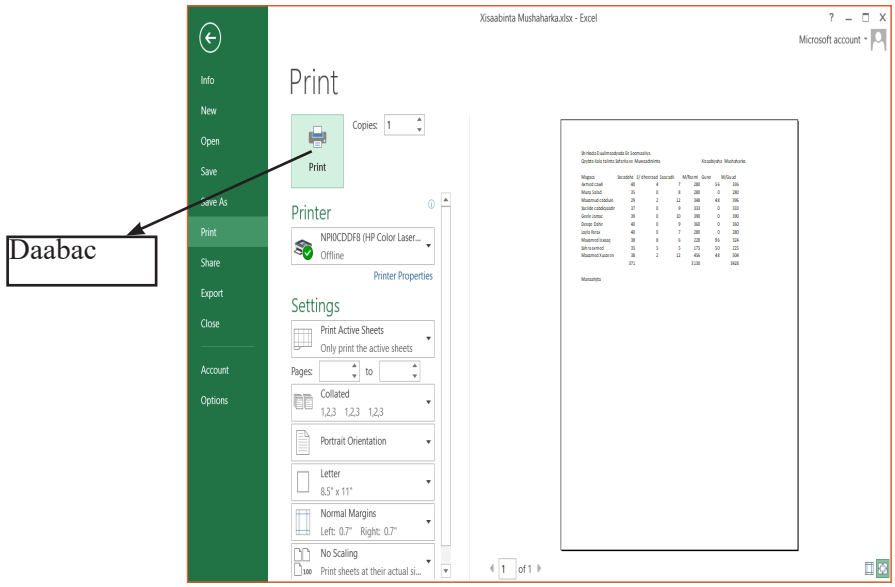
(Print Area) sida ka muuqata sawirka hoose.



4. Guji badhanka jahada xaashi-hawleedka (Page Oreintation) ee kooxda page setup group, kadib dooro **Portrait** ama **Landscape.**

5. Guji carabka **File,** kadib guji print preview inta aadan daabicin

6. Guji badhanka amarka Print. Sida ka muuqata labada sawirka hoos ku xusan.



Waxqabadka 6aad:

Waxaa maxay farqiqa u dhexeeya jahada bogga (Page orientation) sida Lanscape iyo Portrait marka la jooga xaashi-hawleedka ee barnaamijka Excel 2013.

Waxqabadka 7aad:

Cilmi-baaris: Raadi Qaabka gaaban (**shortcut**) ee loo daabici karo xaashi-hawleedka. Adigoo daabacaya faylka aad hore u diyaarisay ee magaciisu yahay "**Xisaabinta Mushahark.xlsx**"

Casharka 2aad: Ku shaqaynta Qaacida Xisaabkeed iyo isla'egta (Working Formulas) ee Barnaamijka Excel 2013.

Ujeedooyinka casharka

Dhammaadka casharkan bare-ardaydu waxa ay awood u yeelanayaan in ay:

1. Samayn karaan isla'eg adag.
2. Koobiyayn karaan, dhaqaajin karaan qoraalka ku jira unugga xaashi – hawleedka.
3. Kala aqoonsan karaan noocyada unugyada xaashi-hawleedka (worksheet).
4. Koobiyayn karaan isla'egta unug xariira (relative cell) iyo mid aan xariirin (absolute cell).
5. Wareejin karaan (Round value) qiimaha unug xaashi-hawleedka (worksheet).

Sameeynta Qaacido Xisaabeed Adag (Complex Formula)

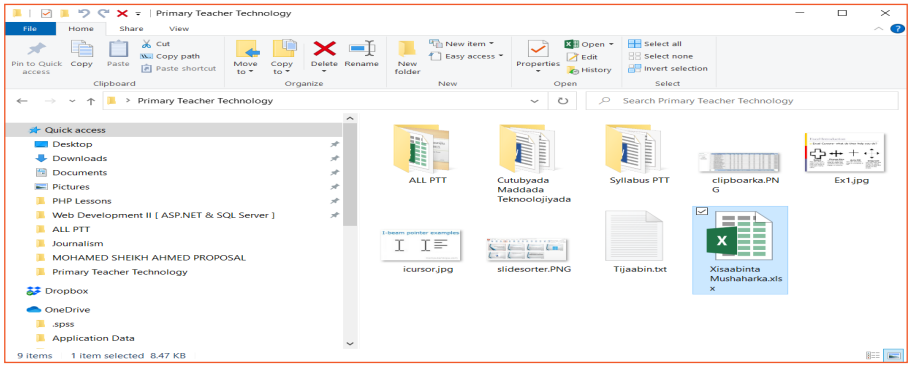
Casharka waxa aan ku baran doonnaa sida loo sameeyo qaacido xisaabeed adag (**complex formula**). Qaacido Adag (Complex formula): Waa isla'eg xisaabeed taas ay ku jirto hal iyo wax ka badan caalamada xisaabta.

- Tusaale ahaan, waa qaacido ka kooban labo calaamadood sida isku - darka iyo isku dhufashada ama ka-jarista iyo isku-qeybinta.
- Calaamadaha xisaabta ayaa looga shaqeeyaa sida ay u kala horeeyaan xagga mudnaansiinta

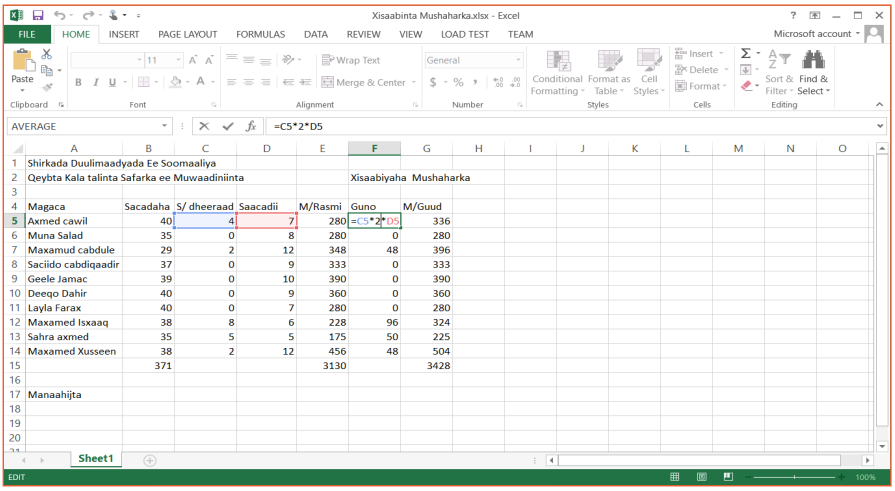
Raac talaabooyinka hoos ku xusansi aad u aragtid dhowr meel oo lagu isticmaalay qaacido xisaabeed adag (**complex formula**)

Talaaboyinka

1. Aad halka uu ka yaalo faylka gudaha kombiyuutarkaaga labo jeer guji "**Xisaabinta Mushahark.xlsx**. Sida ka muuqata sawirka hoose.



2. Labo jeer Guji unugga (cell) **F5** kadib waxaad arki doonta qaacida xisaabeed adag. Sida ka muuqata sawirka hoose.



3. Keydi howsha aad qabatay adigoo hal mar riixaya furuyaasha **Ctrl + S.**

Qaabka kal hormarinta calaamaha xisaabta ee barnaajimka Excel.

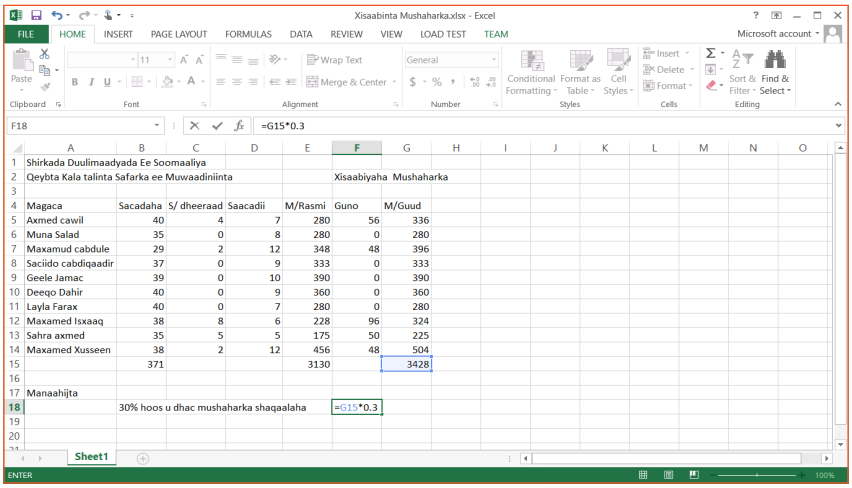
Barnaamijka Excel maadaama uu yahay barnaamij inta badan loo adeegso xisaabinta noocyadeeda kal duwan taas nicnaheed waxa ay tahay in adeegsaduhu uu adeegsanayo calaamada kal duwan sida, ku-darta (+), ku-dhafashada (*), ka-jarida (-), u-qeybinta (/) iwm. Hadda waxa aan baran doonaa sida barnaamijka Excelka u kal hormariya calaamadaha.

- Marka hore Excelku waxa uu ka shaqeeynayaa caalamada qaansada "( )" haddii xisaabta loo adeegsado.

- Waxaa xiga xisaabinta jibbaarada.
- Isku dhufashada iyo kala qeybinta ayaa ku xigta ayadoo laga soo bilaabayo (bidix ilaa midig).
- Isugeyn iyo kala-goyn ayaa kadib la xisaabinayaa ayadoo laga soo bilaabayo (bidix ilaa midig).

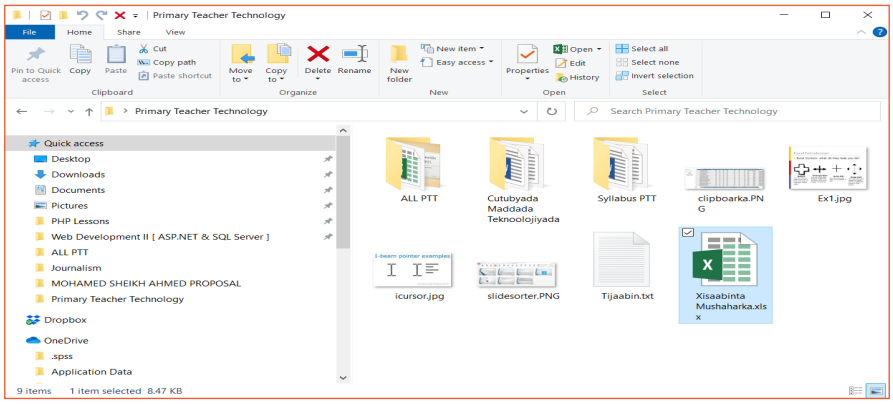
Waxqabadka 1aad:

Soo saar 30% hoos u dhac mushaharka shaqaalaha adigoo raacaya talaabooyinka ka hoose sawirkan.



Talaabooyinka

1. Aad halka uu ka yaallo faylka gudaha kombiyuutarkaaga labo jeer guji "**Xisaabinta Mushahark.xlsx**. Sida ka muuqata sawirka hoose.



2. Guji unugga (cell) **B18** ku qor **30% hoos u dhac mushaharka shaqaalaha**. Kadib guji unugga (cell) **F18** ku qor caalamada la'eg = guji unugga (cell) **G15** qor calaamada * kadib qor 0.3. Riix furaha [**Enter**].
3. Keydi hawsha aad qabatay adigoo hal mar isla qabanaya furuyaasha **Ctrl + S.**

Waxqabadka 2aad:

Cilmi-baaris: imisa unugyo (cells) ayuu ka kooban yahay barnaamijka Excel 2013

Gelinta Fansaarada (Inserting functions)

Fansaarku (**function**) waa qaacidooyin horay loogu soo diyaariyay ama loo soo geliyay barnaamijka Excelka taas oo fududeynaysa qabashada xisaab adag. Barnaajimka Excel waxa uu leeyahay **350** fansaaro (functions) kuwaas oo lagu soo aruuriya 10 qaybood oo kal ah:

1. Fansaarada maaliyada (Financial functions).
2. Fansaarada macquulka ah (logical functions).
3. Fansaarada qoraalka (text functions).
4. Fansaarada tariikhda iyo xilliga (Date and time functions).
5. Fansaarada tiro koobka (statistical functions).
6. Fansaarada raadinta iyo tixraaca (lookup & reference functions).
7. Fansaarada xisaabta iyo tirignometiriga (Math & Trig functions).
8. Fansaarada injineeriyada (engineering functions).
9. Fansaarada macluumaadka (information functions).
10. Fansaarada xogta (database functions).

Isticmaalka Fansaarada

- Markii la qoraayo fansaarka waxaa laga hormarinayaa caalamada la'eg (=). Fansaarku waxaa loo qori karaa qaab gacanta ah (manually).
- Waa inaad taqaannaa magaca iyo xarafka uu ka bilaabanaayo fansaarku.
- In aad adeegsato sanduuqa gelinta (Insert box) waxaa ka deg-degsiimo badan

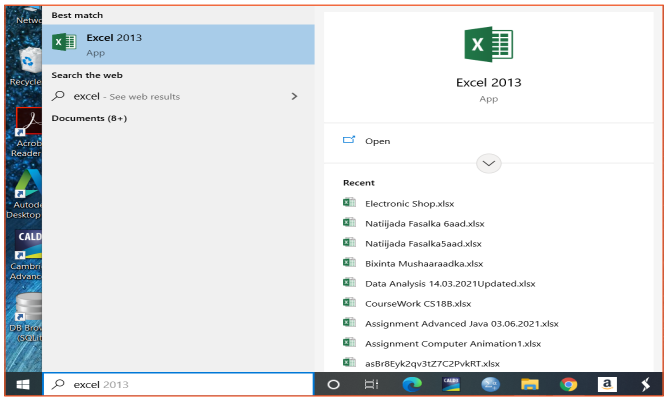
in gacanta aad ku qortid. Isticmaalayaasha khibrada leh ee 'Excel' badiyaa waxa ay doorbidaan habkan oo ah in ay gacanta ku qoraan.

- Markaad gacanta (manually) ku qoreeysid fansaarku waxaa laga maarmaan ah in aad ka bilowdid caalamada la'eg (=).

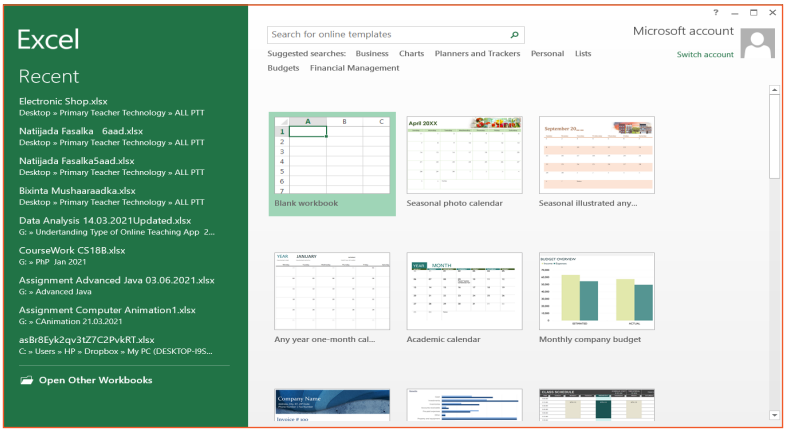
Talaabooyinka hoose waxaa ku baranaynaa sida loo adeegso fansaarada (functions) ugu badan ee la adeegso sida fansaarka wadarta (sum), fansaarka celceliska (Average), fansaarka lambarka ugu wayn (maximum) iyo fansaarka lambarka ugu yar(minimum).

Si aad u tijaabiso adeegsiga fansaarrada raac talaabooyinka hoose:

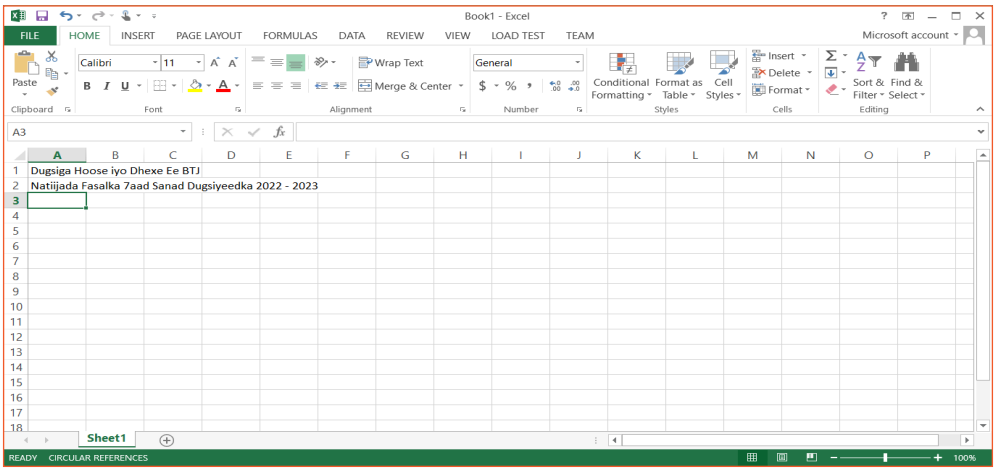
1. Bilaaw barnaamijka Excel 2013. Adigoo ku qoraya qaybta raadinta window-ga. Guji astaanka Excel 2013.



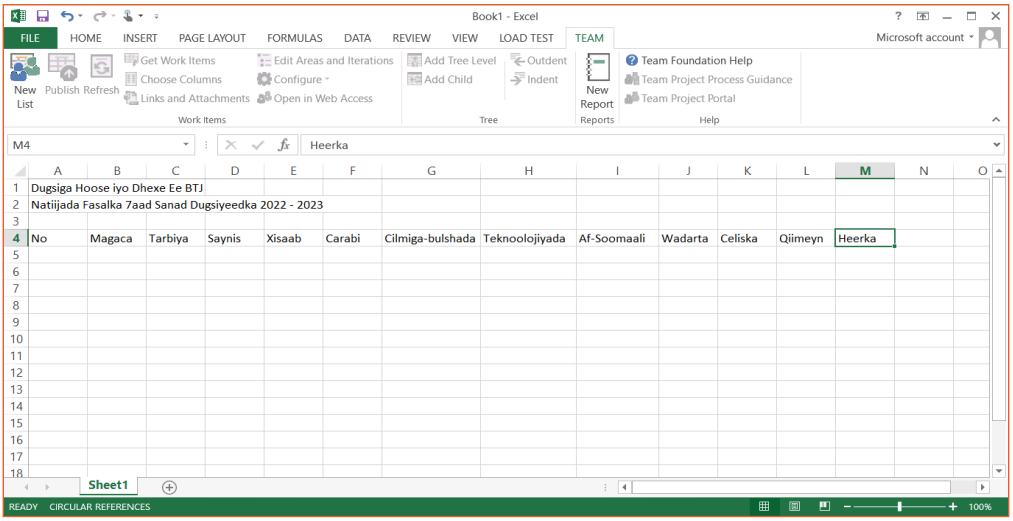
2. Guji buug-hawleed maran (blank workbook),



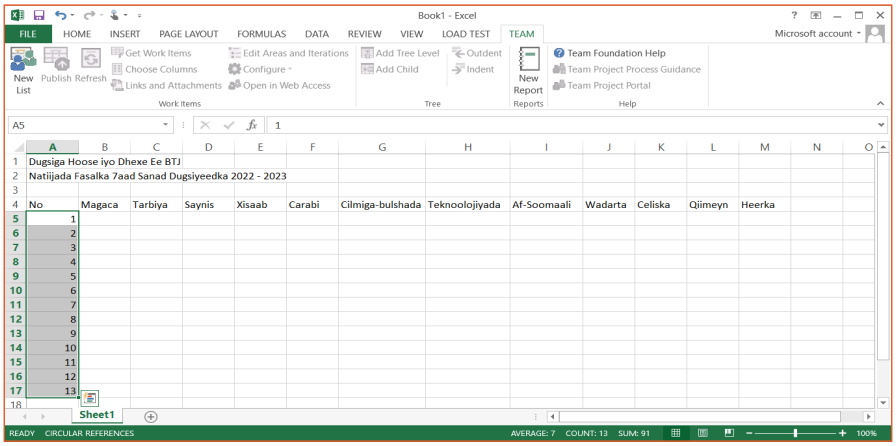
3. Guji unugga (cell) **A1.** Qor **Dugsiga Hoose iyo Dhexe Ee BTJ**, Guji unugga (cell) ku xiga **A2.** Qor **Natiijada Fasalka 7aad Sanad Dugsiyeedka 2022-2023**. Sida ka muuqata sawirka hoose



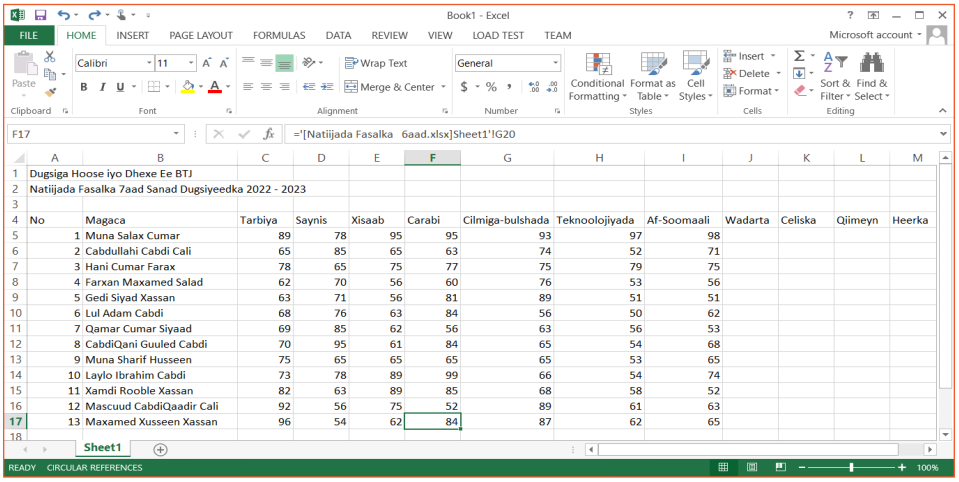
4. Guji unugga (cell) **A4.** Qor **No**, riix furaha tab si aad u aaddo unugga (cell) **B4** ama guji unugga (cell) **B4.** Qor **magaca.** Guji **C4.** Qor **Tarbiya.** Guji **D4.** Qor **Saynis**. Guji **E4.** Qor **Xisaab.** Guji **F4.** Qor **Carabi.** Guji **G4.** Gor **Cilmiga-bulshada.** Guji **H4.** Qor **Teknoolojiyada.** Guji **I4.** Qor **Af-Soomaaali.** Guji **J4.** Qor **Wadarta**. Guji **K4.** Qor **Celceliska.** Guji **L4.** Qor **Qiimayn**. Guji **M4.** Qor **Heerka**. Sida sawirka hoose ka muuqata.



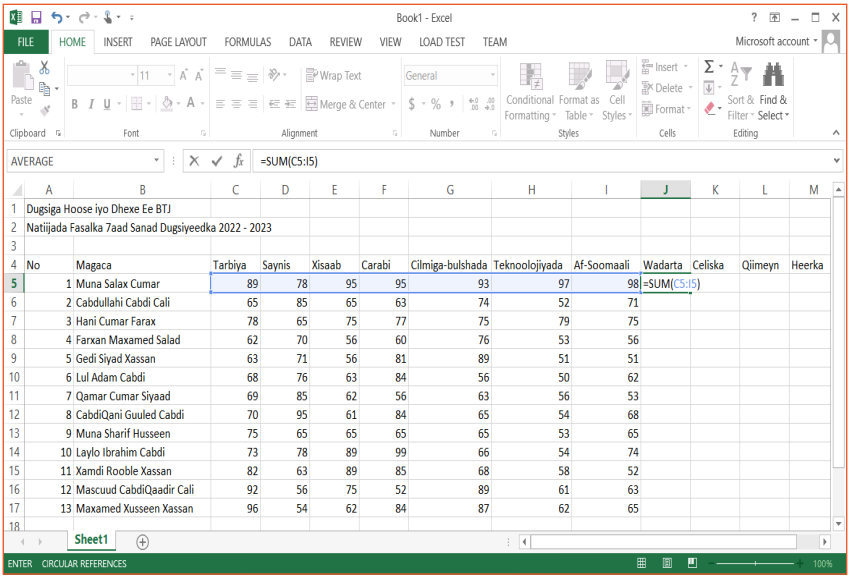
5. Guji unugga (cell) **A5**. Qor 1. Guji unugga (cell) **A6.** Qor 2 midibee (highlight) labada lambar kal ah 1 iyo 2 hoos u jiid gacan buuxinta (fill handle) + ee hagaha mouse-ka ilaa aad ka gaarto unugga (cell) **A17.** Barnaamijka Excelka waxa uu si isku xig xigta u buuxinaya lambarada ilaa inta aad doonto. Sida sawirka hoose ka muuqata



6. Guji unugga (cell) **B5**. Geli dhammaan magacyada ardayda, natiijada imtixaanka maaddo waliba. Hawsha aad qabatay waa in ay u ekaataa sida sawirka hoose.



7. Guji unugga (cell) **J5.** Qor calaamada la'eg = qor fansaarka (function) ah SUM fur calaamada qaansada (. Guji unugga (cell) **C5**. Jiid hagaha mouse-ka laga soo bilaabo unugga (cell) **C5**. Ilaa laga soo gaaro unugga (cell) **I5** xir qaasada). =SUM (C5:I5) Sida ka muuqata sawirka hoose. Riix furaha [**Enter**].

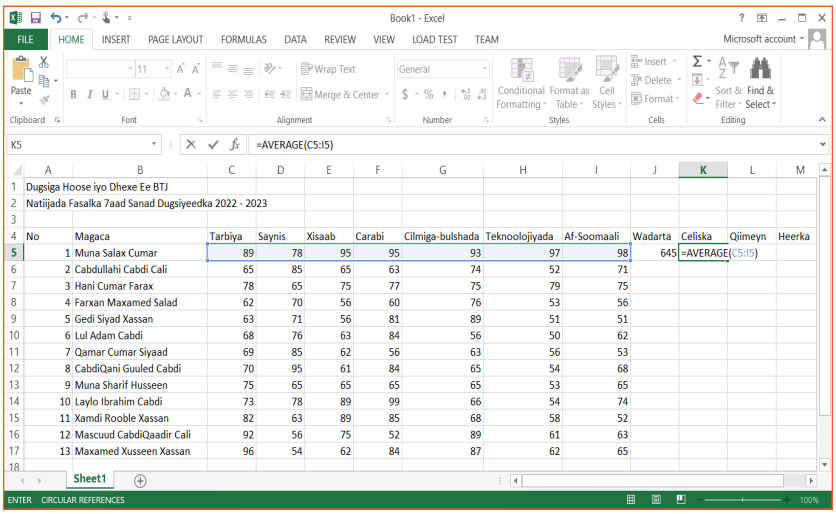


Book1 - Excel

AVERAGE | =SUM(C5:I5)

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Dugsiga Hoose iyo Dhexe Ee BTJ												
2	Natiijada Fasalka 7aad Sanad Dugsiyeedka 2022 - 2023												
3													
4	No	Magaca	Tarbiya	Saynis	Xisaab	Carabi	Cilmiga-bulshada	Teknoolojiyada	Af-Soomaali	Wadarta	Celiska	Qiimeyn	Heerka
5	1	Muna Salax Cumar	89	78	95	95	93	97	98	=SUM(C5:I5)			
6	2	Cabdullahi Cabdi Cali	65	85	65	63	74	52	71				
7	3	Hani Cumar Farax	78	65	75	77	75	79	75				
8	4	Farxan Maxamed Salad	62	70	56	60	76	53	56				
9	5	Gedi Siyad Xassan	63	71	56	81	89	51	51				
10	6	Lul Adam Cabdi	68	76	63	84	56	50	62				
11	7	Qamar Cumar Siyaad	69	85	62	56	63	56	53				
12	8	CabdiQani Guuled Cabdi	70	95	61	84	65	54	68				
13	9	Muna Sharif Husseen	75	65	65	65	65	53	65				
14	10	Laylo Ibrahim Cabdi	73	78	89	99	66	54	74				
15	11	Xamdi Rooble Xassan	82	63	89	85	68	58	52				
16	12	Mascuud CabdiQaadir Cali	92	56	75	52	89	61	63				
17	13	Maxamed Xusseen Xassan	96	54	62	84	87	62	65				

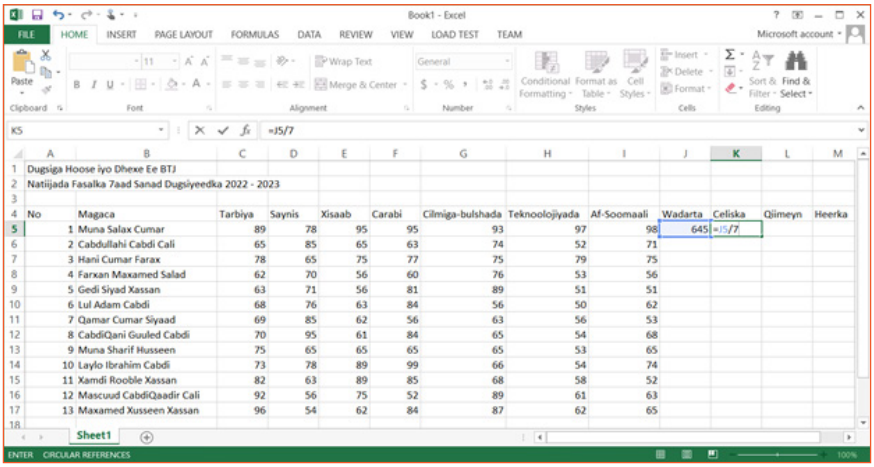
8. Waxaad xisaabin kartaa celceliska maadooyinka ardayga adigoo adeegsanayaa labo siyaabood midkood. Tan kowaad Guji unugga (cell) **K5.** Qor calaamada la'eg = qor ereyga celcelis AVERAGE fur calaamada qaansada (kadib Guji **C5.** Jiid hagaha mouse-ka laga soo bilaabo unugga (cell) **C5**. Ilaa laga soo gaaro unugga (cell) **I5.** xir qaansada). Sida =AVERAGE (C5:I5). Riix furaha [**Enter**]. Tan labaad Guji unugga (cell) **J5** ee ku jirta wadar maaddooyinka ardayga kowaad kadib u qaybi tiradada maaddooyinka sida = **J5/7.** Sida ka muuqata labada sawir ee hoose:



Book1 - Excel

K5 | =AVERAGE(C5:I5)

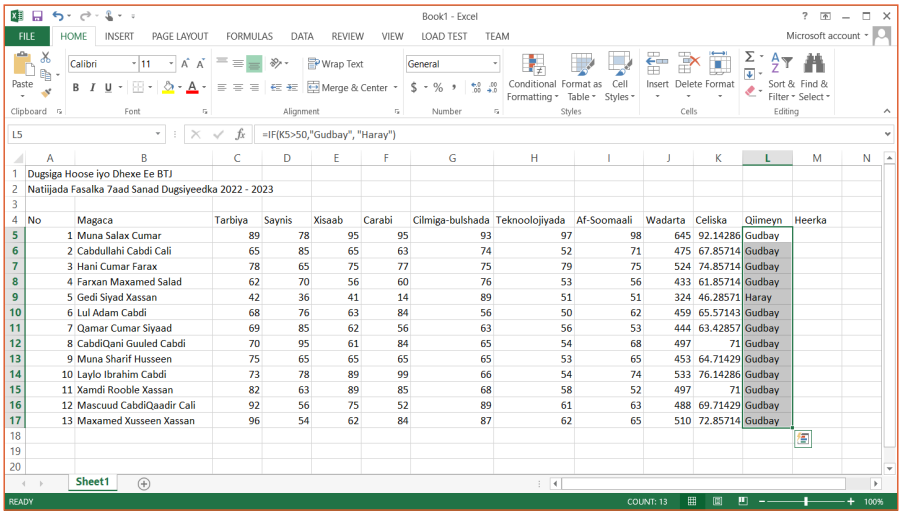
	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Dugsiga Hoose iyo Dhexe Ee BTJ												
2	Natiijada Fasalka 7aad Sanad Dugsiyeedka 2022 - 2023												
3													
4	No	Magaca	Tarbiya	Saynis	Xisaab	Carabi	Cilmiga-bulshada	Teknoolojiyada	Af-Soomaali	Wadarta	Celiska	Qiimeyn	Heerka
5	1	Muna Salax Cumar	89	78	95	95	93	97	98	645	=AVERAGE(C5:I5)		
6	2	Cabdullahi Cabdi Cali	65	85	65	63	74	52	71				
7	3	Hani Cumar Farax	78	65	75	77	75	79	75				
8	4	Farxan Maxamed Salad	62	70	56	60	76	53	56				
9	5	Gedi Siyad Xassan	63	71	56	81	89	51	51				
10	6	Lul Adam Cabdi	68	76	63	84	56	50	62				
11	7	Qamar Cumar Siyaad	69	85	62	56	63	56	53				
12	8	CabdiQani Guuled Cabdi	70	95	61	84	65	54	68				
13	9	Muna Sharif Husseen	75	65	65	65	65	53	65				
14	10	Laylo Ibrahim Cabdi	73	78	89	99	66	54	74				
15	11	Xamdi Rooble Xassan	82	63	89	85	68	58	52				
16	12	Mascuud CabdiQaadir Cali	92	56	75	52	89	61	63				
17	13	Maxamed Xusseen Xassan	96	54	62	84	87	62	65				



Dugsiga Hoose iyo Dhexe Ee BTJ
Natiijada Fasalka 7aad Sanad Dugsiyeedka 2022 - 2023

No	Magaca	Tarbiya	Saynis	Xisaab	Carabi	Cilmiga-bulshada	Teknoolojiyada	Af-Soomaali	Wadarta	Celiska	Qiimeyn	Heerka
1	Muna Salax Cumar	89	78	95	95	93	97	98	645	=J5/7		
2	Cabdullahi Cabdi Cali	65	85	65	63	74	52	71				
3	Hani Cumar Farax	78	65	75	77	75	79	75				
4	Farxan Maxamed Salad	62	70	56	60	76	53	56				
5	Gedi Siyad Xassan	63	71	56	81	89	51	51				
6	Lul Adam Cabdi	68	76	63	84	56	50	62				
7	Qamar Cumar Siyaad	69	85	62	56	63	56	53				
8	CabdiQani Guuled Cabdi	70	95	61	84	65	54	68				
9	Muna Sharif Husseen	75	65	65	65	65	53	65				
10	Laylo Ibrahim Cabdi	73	78	89	99	66	54	74				
11	Xamdi Rooble Xassan	82	63	89	85	68	58	52				
12	Mascuud CabdiQaadir Cali	92	56	75	52	89	61	63				
13	Maxamed Xusseen Xassan	96	54	62	84	87	62	65				

9. Buuxi joog – taxa (column) sida: **J5** ilaa **J17.** Sidoo kale buuxi joog – taxa (column) kal ah: **K5** ilaa **K17.** Adigoo adeegsanaya gacanta buuxinta (fill handle) sida ka muuqata sawirka hoose.



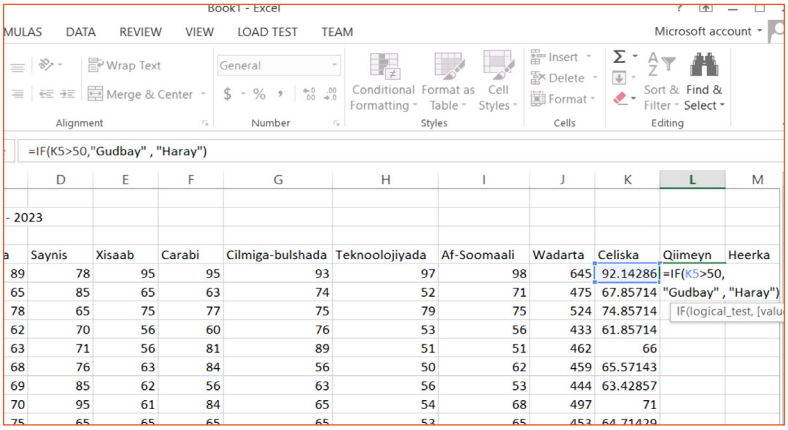
Dugsiga Hoose iyo Dhexe Ee BTJ
Natiijada Fasalka 7aad Sanad Dugsiyeedka 2022 - 2023

No	Magaca	Tarbiya	Saynis	Xisaab	Carabi	Cilmiga-bulshada	Teknoolojiyada	Af-Soomaali	Wadarta	Celiska	Qiimeyn	Heerka
1	Muna Salax Cumar	89	78	95	95	93	97	98	645	92.14286	Gudbay	
2	Cabdullahi Cabdi Cali	65	85	65	63	74	52	71	475	67.85714	Gudbay	
3	Hani Cumar Farax	78	65	75	77	75	79	75	524	74.85714	Gudbay	
4	Farxan Maxamed Salad	62	70	56	60	76	53	56	433	61.85714	Gudbay	
5	Gedi Siyad Xassan	42	36	41	14	89	51	51	324	46.28571	Haray	
6	Lul Adam Cabdi	68	76	63	84	56	50	62	459	65.57143	Gudbay	
7	Qamar Cumar Siyaad	69	85	62	56	63	56	53	444	63.42857	Gudbay	
8	CabdiQani Guuled Cabdi	70	95	61	84	65	54	68	497	71	Gudbay	
9	Muna Sharif Husseen	75	65	65	65	65	53	65	453	64.71429	Gudbay	
10	Laylo Ibrahim Cabdi	73	78	89	99	66	54	74	533	76.14286	Gudbay	
11	Xamdi Rooble Xassan	82	63	89	85	68	58	52	497	71	Gudbay	
12	Mascuud CabdiQaadir Cali	92	56	75	52	89	61	63	488	69.71429	Gudbay	
13	Maxamed Xusseen Xassan	96	54	62	84	87	62	65	510	72.85714	Gudbay	

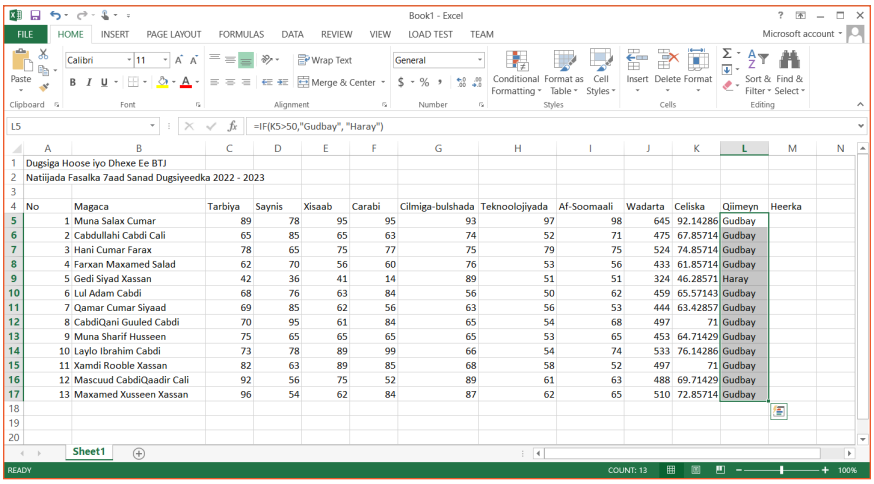
10. Talaabadan waxa aan ku baran doonaa sida loo qiimeeyo arday ayadoo la fiirinaya celceliskiisa haddii uu helo celcelis ahaan wax ka yar 50% wuu **haray**, dhanka kale haddii uu helo wax ka badan 50% wuu **gudbay**. Waxa kaloo xusid mudan in tusaalahan aan ku adeegsan doono fansaar loo yaqaano haddii(**IF**) oo qayb ka ah **Fansaarada macquulka ah** (logical functions). Fansaar (function) haddii (**IF**) wxuu ka kooban yahay saddax qayboo oo kala ah (1) tijaabada macquulka ah (Logical_test), (2) haddii qiimahu run yahay (value_if_true) iyo

(3) haddii qiimahu been yahay (value_if_false). Sida = IF (logical_text, [value_if_true], [value_if_false] . Raac talaabooyinkaan hoose si aad u samayso.

a. Dooro unugga (cell) **L5**, qor calaamada la la'eg = ama calaamada ku-darta + qor **IF** fur qaansada (guji unugga(Cell) **K5** qor calaamada ka - wayn adigoo riixa furuha ay ku dul qoran tahay > qor **50** qor calaamada hakadka , fur calaamaada **"** qor **Gudbay** kadib soo xir calaamada **"** qor calaamada , qor calaamda **"** qor **Haray** xir calaamada **"** soo xir qaansada). Iska hubi in sida soo socota aad u qortay =IF(K5>50,"Gudbay", "Haray")



b. Riix furaha [Enter]. Adigoo adeegsanaya gacanta buuxinta (fill handle) + jiid hagaha mouse-ka adigoo ka bilaabaya unugga (cell) **L5** ilaa unugga (cell) **L17.** Sida sawirka hoose oo kale.



11. Si aan u ogaano heerka ardayga uu ku gudbay sida in uu helay A, B, C iwm. Tusaale haddii ardaygu uu helo 90 darajo iyo wax ka badan waxa aan lee nahay heerkiisa waa **A.**

Wax ka badan 80. **B.**

Wax ka badan 70 **C**.

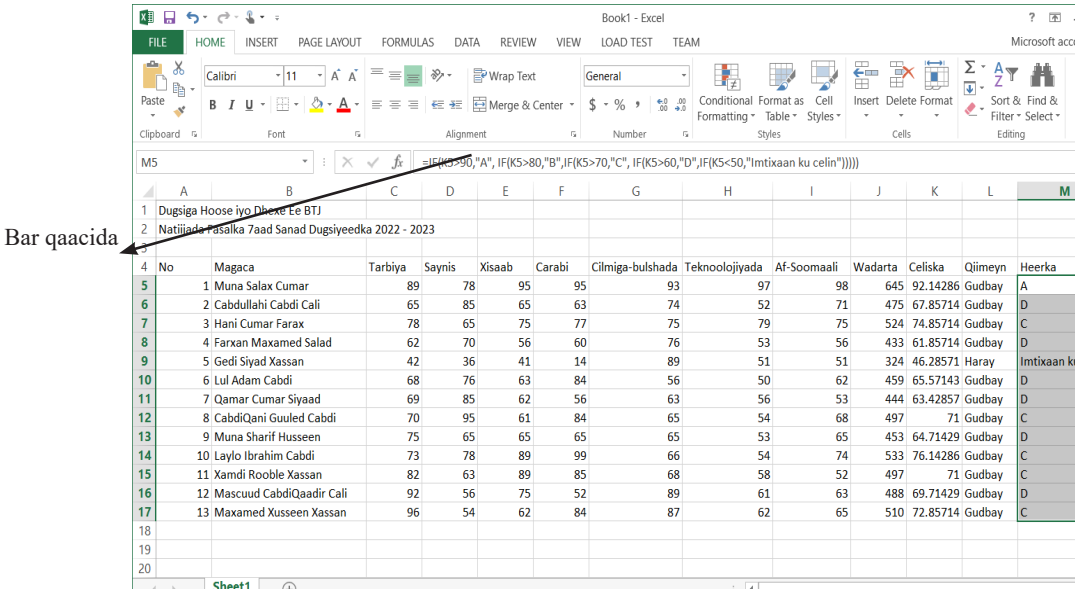
Wax ka badan 60 **D**.

Wax ka yar 50 **imtixaan ku celin.** Raac talaabooyinkaan hoos ku xusan.

a. Guji unugga (cell) **M5.** Qor calaamada la'eg = qor IF fur qaansada (Guji unugga(cell) **K5** qor calamada ka-wayn > qor 90 qor calaamada, qor "A" qor IF fur qaansada (Guji **K5** qor calamada ka-wayn > qor 80 calaamada , qor "B" qor calaamada , qor IF fur qaansada (Guji **K5** qor calamada ka-wayn > qor 70 calaamada , qor "C" qor calaamada , qor IF fur qaansada (Guji **K5** qor calamada ka-wayn > qor 60 calaamada , qor "D" qor calaamadda , qor IF fur qaansada (Guji **K5** qor calamada ka-yar < qor 50 calaamada , qor "Imtixaan ku celin" shan jeer xir qaansada.

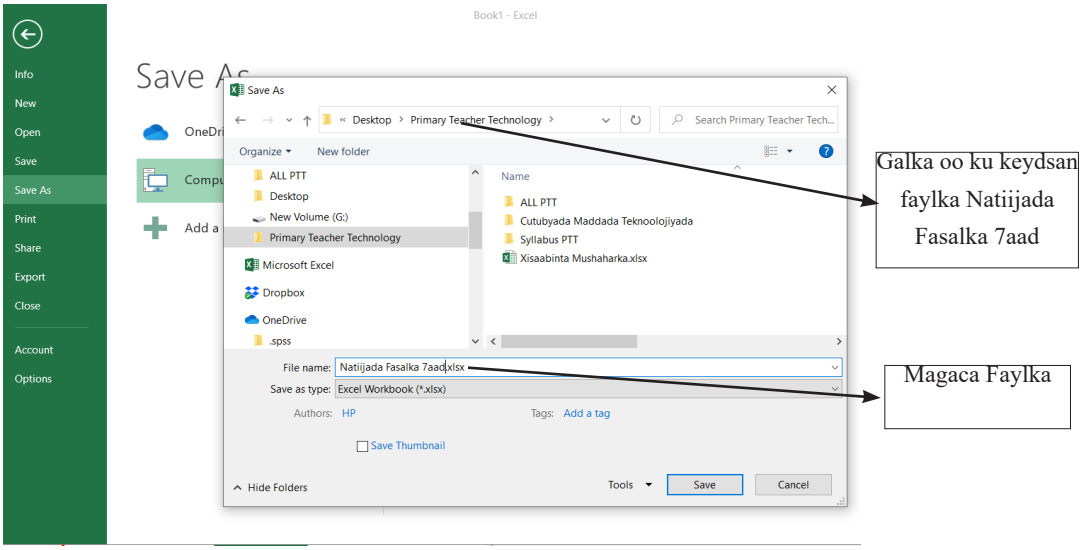
=IF(K5>90,"A", IF(K5>80,"B",IF(K5>70,"C",
IF(K5>60,"D",IF(K5<50,"Imtixaan ku celin")))))

b. Riix furaha [Enter]. Adigoo adeegsanaaya gacanta buuxinta (fill handle) + jiid hagaha mouse-ka ka bilaaw unugga (cell) **M5** ilaa unugga (cell) **M17.** Sida ka muuqata labada sawir oo hoose. Guji unugg(cell) maran sida **M18**



No	Magaca	Tarbiya	Saynis	Xisaab	Carabi	Cilmiga-bulshada	Teknoolojiyada	Af-Soomaali	Wadarta	Celiska	Qiimeyn	Heerka
1	Muna Salax Cumar	89	78	95	95	93	97	98	645	92.14286	Gudbay	A
2	Cabdullahi Cabdi Cali	65	85	65	63	74	52	71	475	67.85714	Gudbay	D
3	Hani Cumar Farax	78	65	75	77	75	79	75	524	74.85714	Gudbay	C
4	Farxan Maxamed Salad	62	70	56	60	76	53	56	433	61.85714	Gudbay	D
5	Gedi Siyad Xassan	42	36	41	14	89	51	51	324	46.28571	Haray	Imtixaan k
6	Lul Adam Cabdi	68	76	63	84	56	50	62	459	65.57143	Gudbay	D
7	Qamar Cumar Siyaad	69	85	62	56	63	56	53	444	63.42857	Gudbay	D
8	CabdiQani Guuled Cabdi	70	95	61	84	65	54	68	497	71	Gudbay	C
9	Muna Sharif Husseen	75	65	65	65	65	53	65	453	64.71429	Gudbay	D
10	Laylo Ibrahim Cabdi	73	78	89	99	66	54	74	533	76.14286	Gudbay	C
11	Xamdi Rooble Xassan	82	63	89	85	68	58	52	497	71	Gudbay	C
12	Mascuud CabdiQaadir Cali	92	56	75	52	89	61	63	488	69.71429	Gudbay	D
13	Maxamed Xusseen Xassan	96	54	62	84	87	62	65	510	72.85714	Gudbay	C

7. U kaydi qaabka gaaban (shortcut) adigoo riixaya furayaasha kala ah **Ctrl + S.** kaydi faylka sida sawirka hoose kaaga muuqata una bixi faylka magaciisa "**Natiijada Fasalka 7aad.xlsx**". Gaar ahaan faylka hadda waxaa lagu kaydiyay galka magaciisu yahay "Primary Teacher Technology"

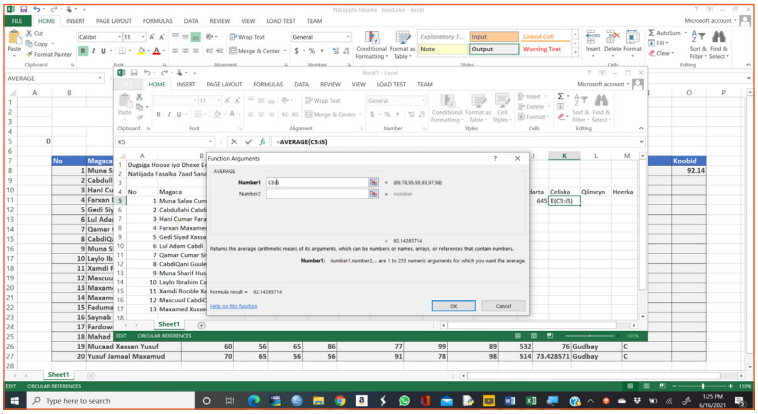


8. Guji badhanka "Save".

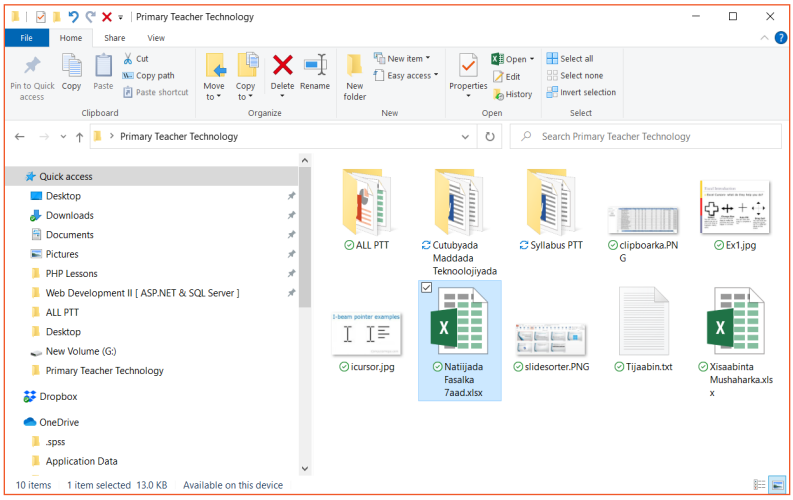
9. Guji astaanta ee dhanka midig daaqadada Excel.

Waxqabadka 3aad:

Raac talaabooyinka ka hooseeysa sawirka sida aad u soo saarto celceliska ardayga



1. Aad halka uu ka yaalo faylka gudaha kombiyuutarkaaga labo jeer guji "**Natiijada Fasalka 7aad.xlsx**. Sida ka muuqata sawirka hoose.

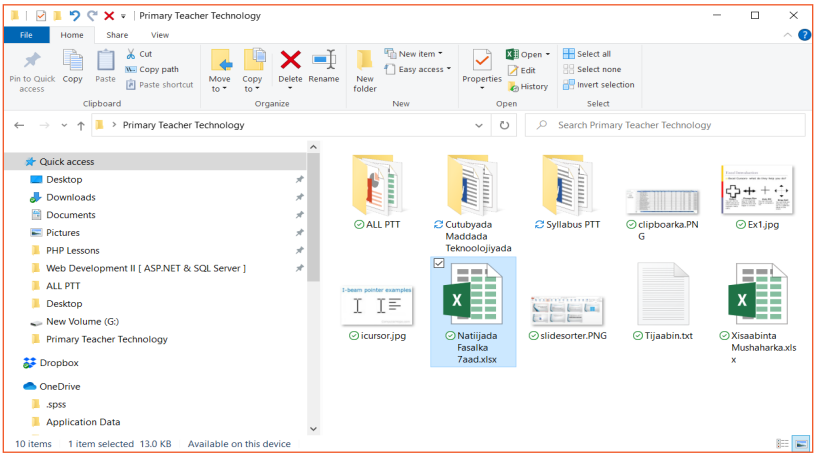


1. Guji unugga (cell) **K5**.
2. Guji badhanka gelinta fansaarka (function) ee barta – qaacidada (formula bar).
3. Guji fansaarka(function) AVERAGE ee liiska doorashada fansaarka, aqri fariinta kuu muuqayanaysa
4. Guji **Ok**

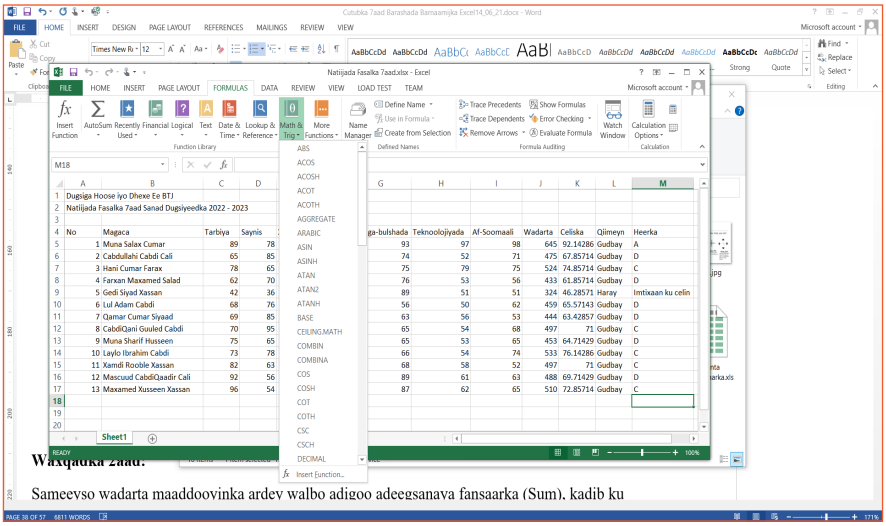
Waxqabadka 4aad:

Soo qor inta fansaar (functions) ee ku jirta Fansaarada xisaabta iyo tirignometirik (Math & Trig functions), isku day inaad is-barto adeegsiga fansaaradaas qaarkood.

1. Aad halka uu ka yaalo faylka "**Natiijada Fasalka 7aad.xlsx**" gudaha kombiyuutarkaaga labo jeer guji Sida ka muuqata sawirka hoose.



1. Guji carabka **Formulas** oo ku jira Ribbonka
2. Guji Fansaarada xisaabta iyo tirignometirik (Math & Trig functions).
3. Soo qor inta fansaar (functions) ee ku jirta, isku day inaad is-barto adeegsiga fansaaradaas qaarkood.



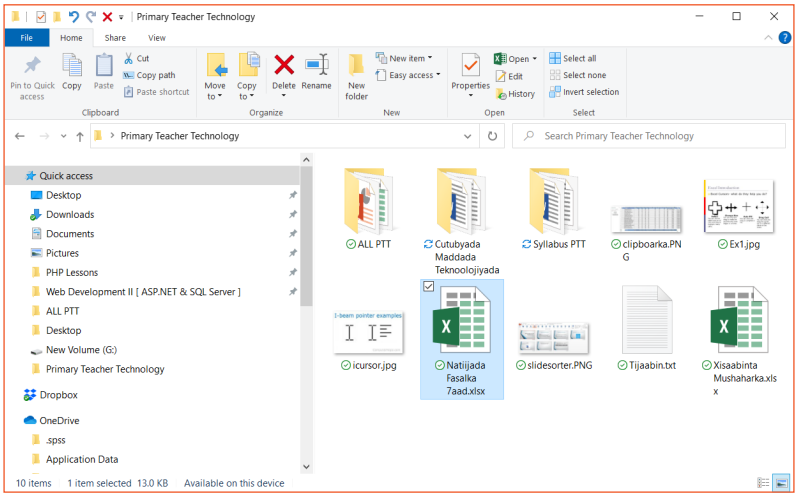
Koobiyaynta iyo Dhaqaajinta Unugga (Cell)

Waxaad koobiyayn kartaa ama dhaqaajin kartaa xogta ku jirta xaashi-hawleedka (Worksheet) ama inta u dhaxaysa xaashiyo-hawleedyo (Worksheets) adigoo adeegsanaaya:

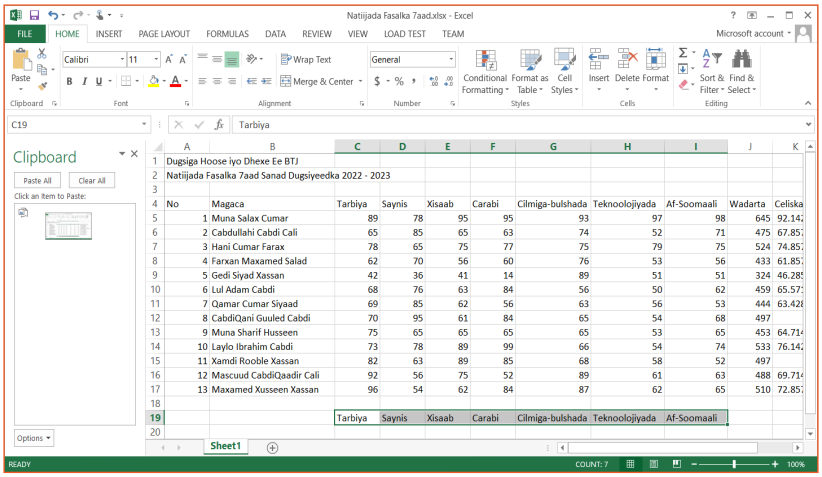
- Jarid (cut), Koobiyayn (copy) and dhajin (Paste buttons).
- Adeegso astaanta buuxinta (fill handle) taas ay ka muuqanayso unugga la joogo (active cell).

Raac talaabooyinka hoose si aad koobi u sameeyso ama aad u dhaqaajiso unugga (Cell)

1. Aad halka uu ka yaalo faylka gudaha kombiyuutarkaaga labo jeer guji "**Natiijada Fasalka 7aad.xlsx**. Sida ka muuqata sawirka hoose.

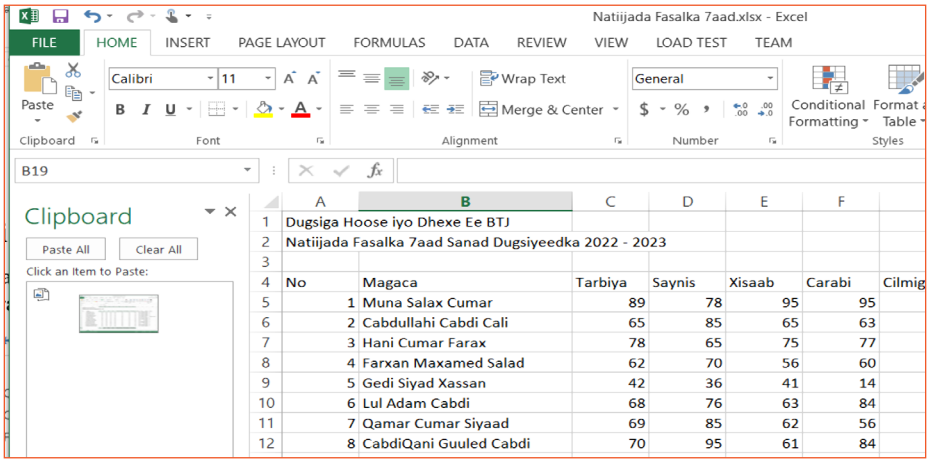


2. Dooro baaxada (range) C4: I4 adigoo midibeynaayo (Highlight) kadib guji badhanka koobiyaynta (copy button) ee kooxda clipboard ee carabka Home.
3. Guji sanduuqa bilaabida (launcher) ee kooxda clipboard
4. Guji unugga (cell) C19, kadib guji badhanka dajinta (Paste Button) ee kooxda clipboard.
5. Riix furaha [Delete].



Kaydinta yar (office clipboard)

Kaydinta yar (office clipboard) waxaa ay si ku meel gaar ah u keydinaysaa wixii la koobiyeeyay ee la soo jaray. Waxa uu hayn karaa ilaa 24 nuqul oo ka kooban qoraalo iyo sawiro, waxaa sawirka hoose ka muuqdo 1 koobiyayn oo ka mid ah.



Waxqabadka 5aad:

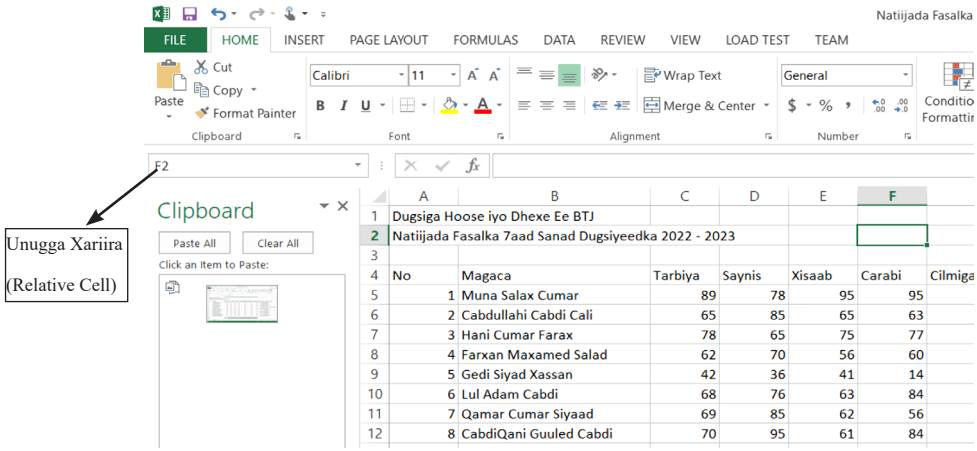
Cilmi-bariis: Waa maxay waxtarka ay leedahay adeegsiga kaydinta yar(clipboard).

Noocyada Tixraaca Unugyada (cells) ee Barnaamijka Excel-ka

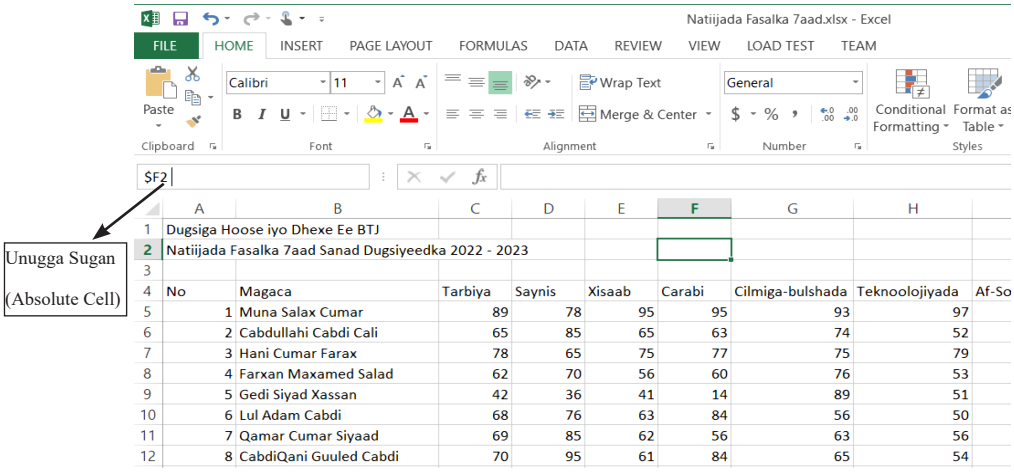
Tixraaca Unugyada (Cell references) ee barnaajimka Excel 2013 waxaa loo qaybiyaa saddex qaybood oo kal ah: (1) Tixraaca unugyada xiriira (Relative cell references),

(2) Tixraaca unugyada sugan (Absolute cell references) iyo (3) Tixraaca unugyada isku dhafka (Mix cell references).

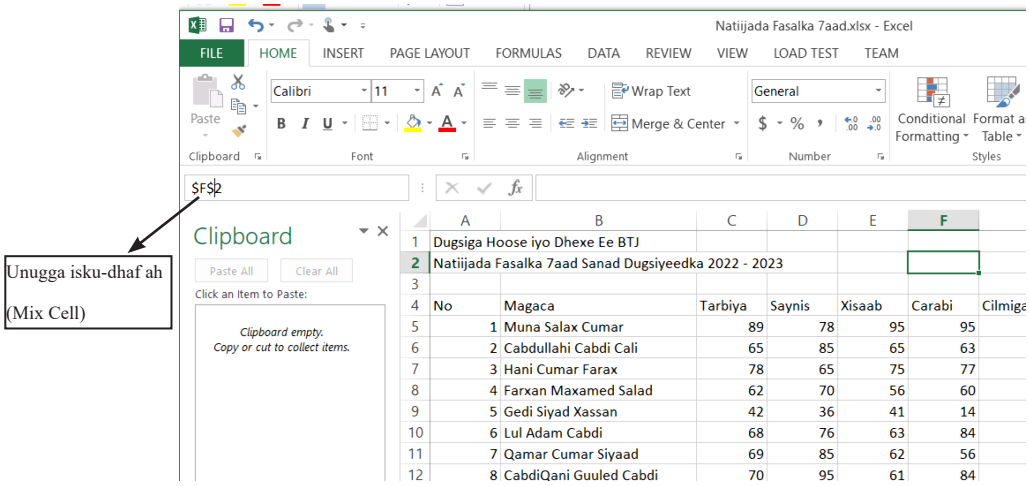
- **Tixraaca unugyada xiriira (Relative cell reference):** waa unugyada is beddela markii la koobiyeeyo isla markaa lagu dhajiyo meel cusub. Waa kan ugu badan ee lagu arko barnaamijka excel-ka. Tusaale ahaan unugga **F2.** Sida sawirka hoose kaaga muuqata.



- **Tixraaca unugyada sugan (Absolute cell reference) :** Unugyada sugan (Absolute cells): waa kuwa aan is baddelin markii la koobiyeeyo isla markaana lagu dhajiyo meel cusub. Abuur adigoo ka dhigaya calaamada dollarka ($) ka hor xarafka joog taxa (column) iyo tirada jiif taxa (rows) ee cinwaanka unugga (cell address) tusaale: **$F$2.** Sida ka muuqata sawirka hoose



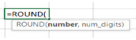
- **Tixraaca unugyada isku-dhafka (Mix cell references):** habkan waa mid labadaba isku dara ee unugga xiriira (Relative cell) iyo midka sugan (Absolute cell). Tusaale: Marka aad koobiyaysato qaacido, waxaa laga yaabaa inaad rabto inaad badesho Nambarka jiif taxa (rows) laakin in uu sidiisa ahaado xarafka joog taxa (column) sida ($F2). Sida sawirka hoose kaga muuqata.



Waxqabadka 6aad:

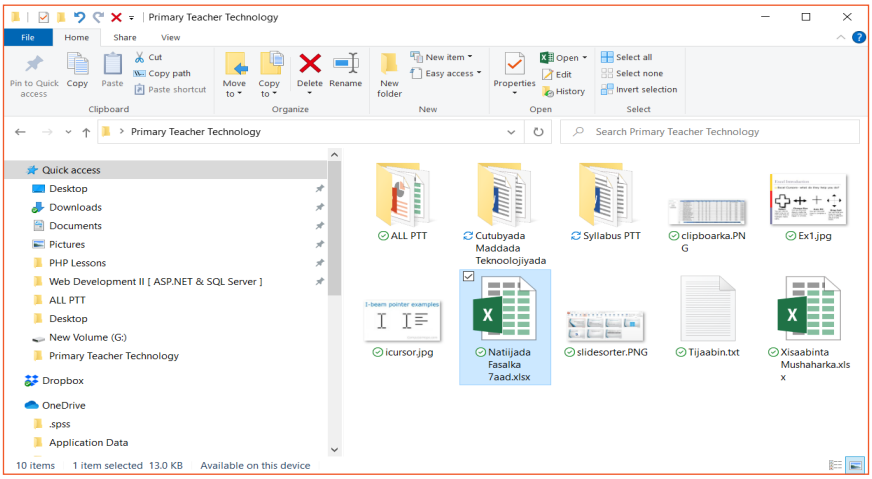
Cilmi-baaris: Raadi wax yaabaha loo adeegsado unugga sugan (Abosule Cell) iyo unugga isku-dhafka (Mix Cell).

Isku Buuxinta Tirooyinka (Rounding Numbers)

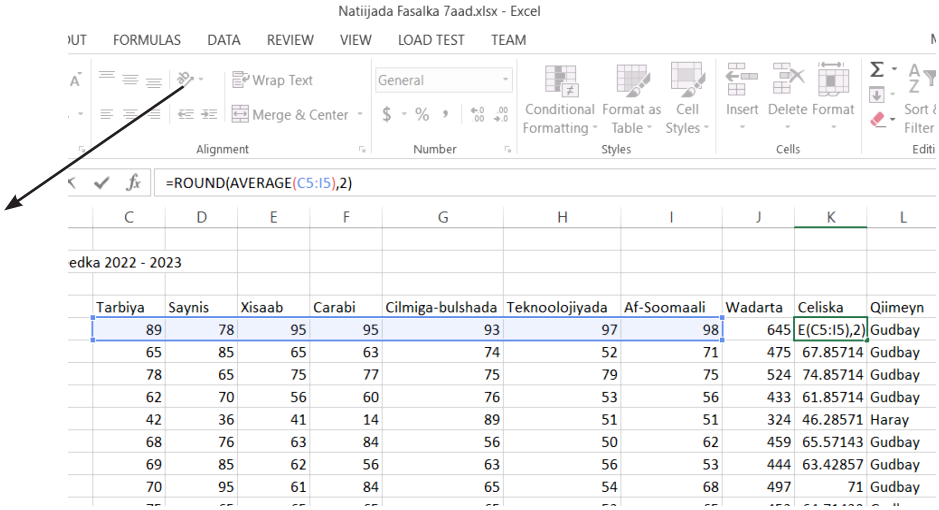
Soo aruurinta tirooyinka waxaa loo adeegsadaa in lagu soo gaabiyo tiro jajabkeeda dheer yahay (decimal point) tusaale ahaan. Waxaa loo soo gaabin karaa labo god oo dhibicda ka danbeysa barnaamijka Excel waxaa ku jira fansaar (function) suurtagal ka dhigaaya tirooyin dhaadheer in la soo gaabiyo sida fansaarka (function) ROUND. Fansaar (Function) ROUND waxa uu leeyahay labo qeybood sida tirada (number) la soo gaabinaayo iyo inta la soo gaabinaayo (**num_digit**). 

Adeegso fansaarka 'ROUND' si aad u soo koobtid celcelika natiijada ardayda Fasalka 7aad". Tusaalaha hoose waxa aan ku baran doonaa is dhex galinta labo fansaar (function) oo kal duwan sida fansaarka (function) ROUND iyo fansaarka (function) AVERAGE. Raac talaabooyinka hoose.

1. Aad halka uu ka yaalo faylka gudaha kombiyuutarkaaga labo jeer guji "**Natiijada Fasalka 7aad.xlsx**. Sida ka muuqata sawirka hoose.



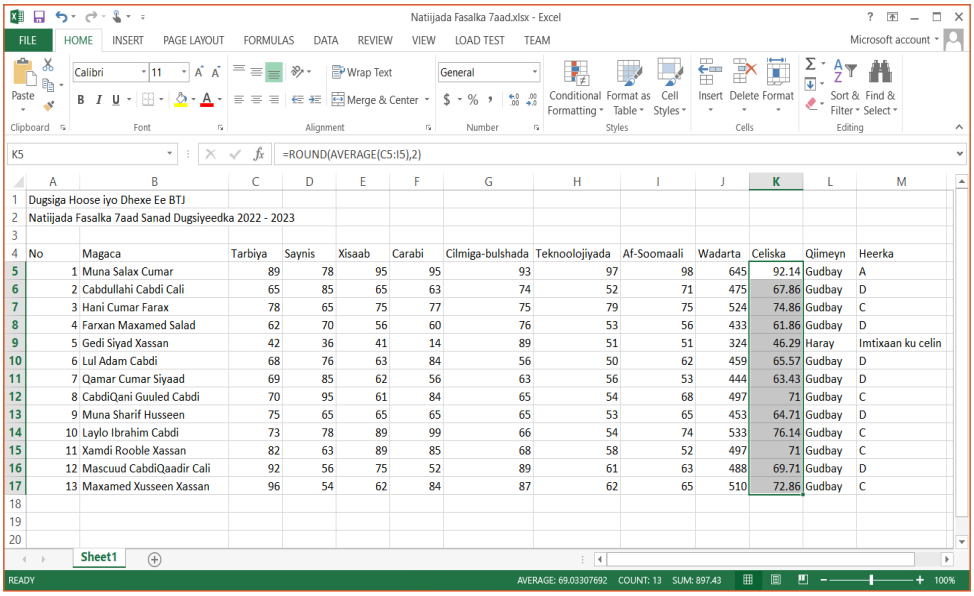
2. Guji unugga (cell) **K5**. aad qeybta barta-qaacida (formula bar) guji inta u dhaxaysa calaamada la'eg = iyo fansaarka AVERAGE kadib qor fansaarka (function) ROUND fur qaansada (geli AVERAGE(C5:J5) qor calaamadda hakadka ee "," qor 2 (haddii aad xisaabta jajabka laba number ku soo koobaysid), kadib riix furaha [Enter].



Tarbiya	Saynis	Xisaab	Carabi	Cilmiga-bulshada	Teknoolojiyada	Af-Soomaali	Wadarta	Celiska	Qiimeyn
89	78	95	95	93	97	98	645	E(C5:I5),2)	Gudbay
65	85	65	63	74	52	71	475	67.85714	Gudbay
78	65	75	77	75	79	75	524	74.85714	Gudbay
62	70	56	60	76	53	56	433	61.85714	Gudbay
42	36	41	14	89	51	51	324	46.28571	Haray
68	76	63	84	56	50	62	459	65.57143	Gudbay
69	85	62	56	63	56	53	444	63.42857	Gudbay
70	95	61	84	65	54	68	497	71	Gudbay

3. Adigoo adeegsanaya gacanta buuxinta (fill handle) jiid hagaha mouse-ka ka bilaw unugga (cell) **K5** ilaa unugga (cell) **K17.** Guji unugg(cell) maran

4. Hal mar riix labada fure ee kala ah **Ctrl + S.**



Waxqabadka 7aad:

Cilmi – baaris: Raadi Qaab kale aad u soo gaabin kartid qiimaha ku jira unugga

Ujeedooyinka casharka

Dhammaadka casharkan bare-ardaydu waxa ay awood u yeelanayaan in ay:

1. Qaabayta qoraalka unugga (cell formatting)
2. Baddeli karaan farta (font) iyo cabbirka farta (font size).
3. Baddeli karaan qaabka farta (font style) iyo waafajinta (alignment).
4. Saxi karaan balaca joog taxa (column width).
5. Galin karaan oo tirtiri karaan jiif taxa (rows) iyo joog taxa (columns).
6. Midibayn karaan, xuduud u samayn karaan jiif taxa (rows) iyo joog taxa (columns) xaashi-hawleedka (worksheet).
7. Magacaabi karaan, rari karaan xaashi-hawleedka.

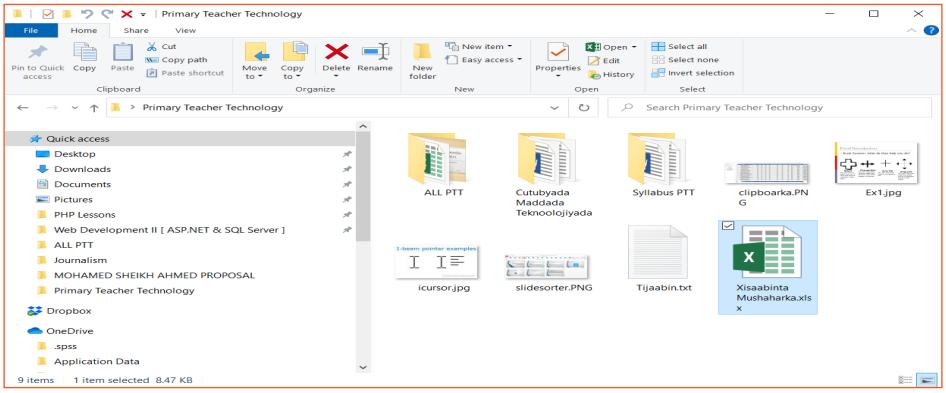
Habaynta Qiimaha (Formatting Values)

Qaabka unugga (Format cell) ayaa go'aamiya sida summadaha (labels) iyo qiimayaasha (values) ay u ekaanayaan sida:

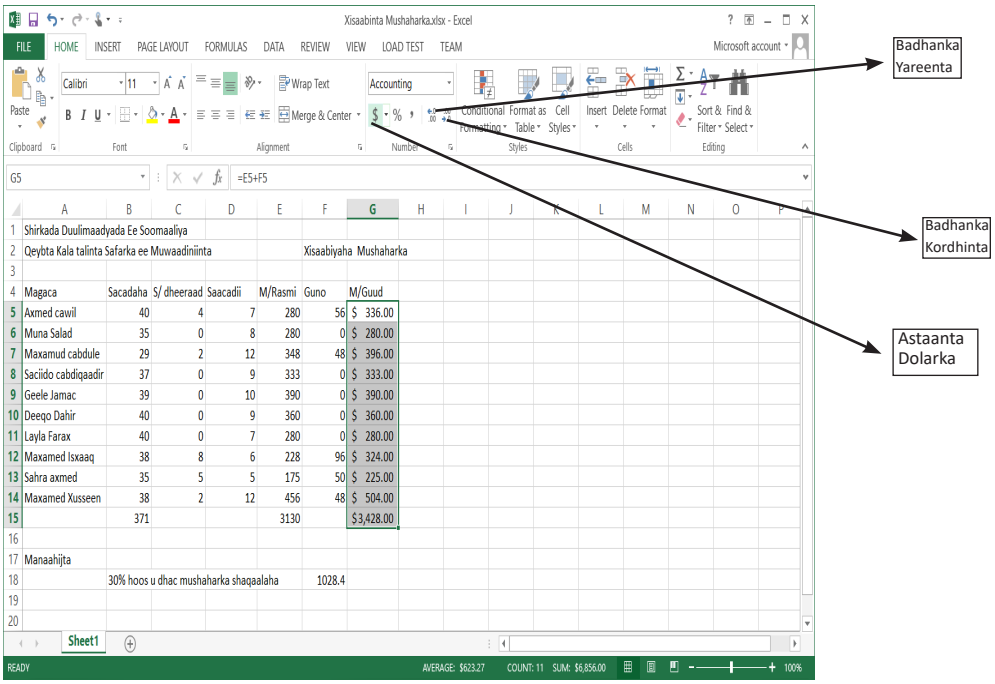
- Far tikh ah (bold), far jiifta (italic), calaamad dolarka (dollar sign) iyo hakadka (comma).
- Qaabaynta (Formatting) waxba Kama badaleyso xogta, kaliya muuqaalkeeda ayay badeshaa.

Si aad u habayso summadaha iyo qiimayaasha qaabkooda waxaad dooranaysaa unugyada aad habayn rabtid (rang of cell) kadibna dalbo qaabayta (apply formatting). Raac talaaboyinka hoose si aad u qabato howshaas oo kale

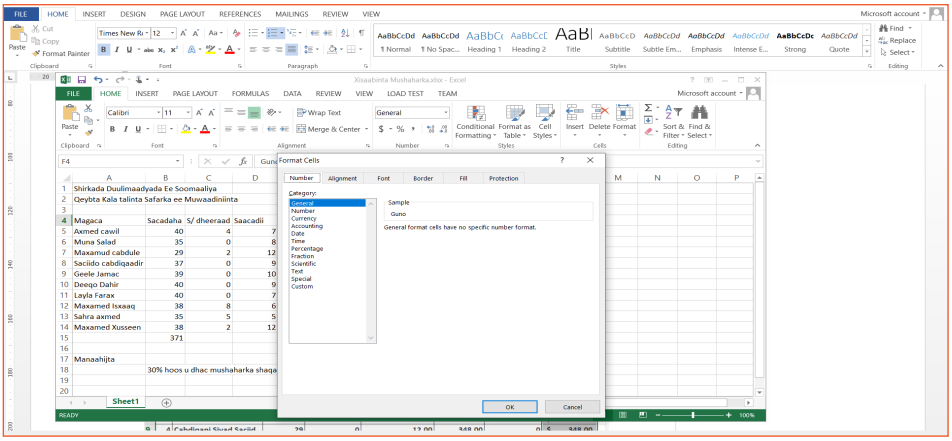
1. Aad halka uu ka yaalo faylka gudaha kombiyuutarkaaga labo jeer guji "**Xisaabinta Mushahark.xlsx**. Sida ka muuqata sawirka hoose.



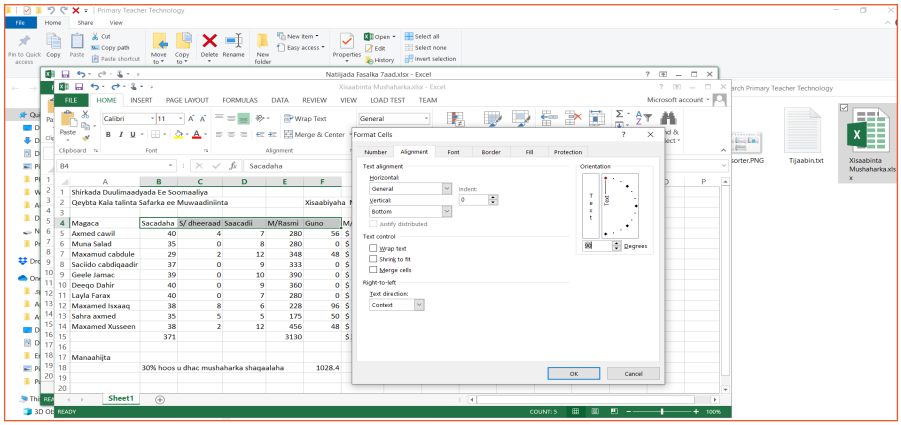
2. Dooro baaxada unugg-yada(cells) **G5:G15** kadib guji badhanka tirada xisaabiyaha (Acounting Number Format Button) $ koox tirooyinka ee carabka Home. Sida sawirka hoose ka muuqata



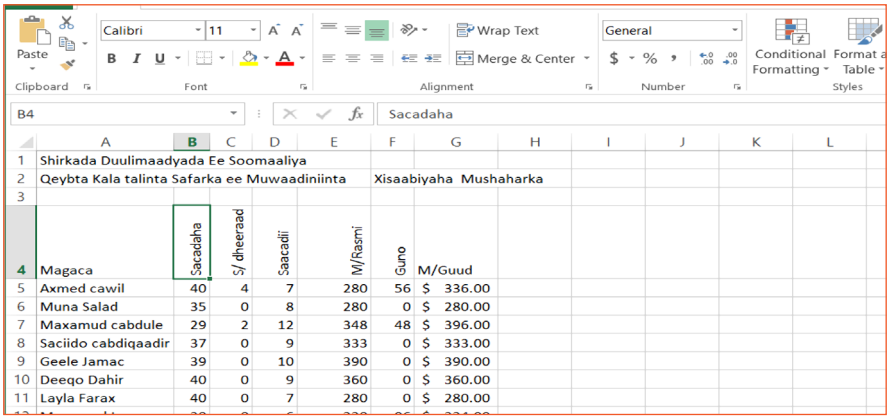
3. Dooro baaxada unugg-yada (cells) sida **B5:F5**, ka dib guji sanduuqa bilawga "dialog box launcher" koox tirooyinka ee carabka Home. Sida sawirka hoose



4. Guji carabka toosin (alignment) baddel xagasha qoraalka ka muuqata dhanka midigta (right side). Sida ka muuqata sawirka hoose.



5. Guji badhanka ok. Waxaad arki doontaa farta qoraalka oo u qoran qaab taagan xagal dhan 90. Sida sawirka ka muuqata.

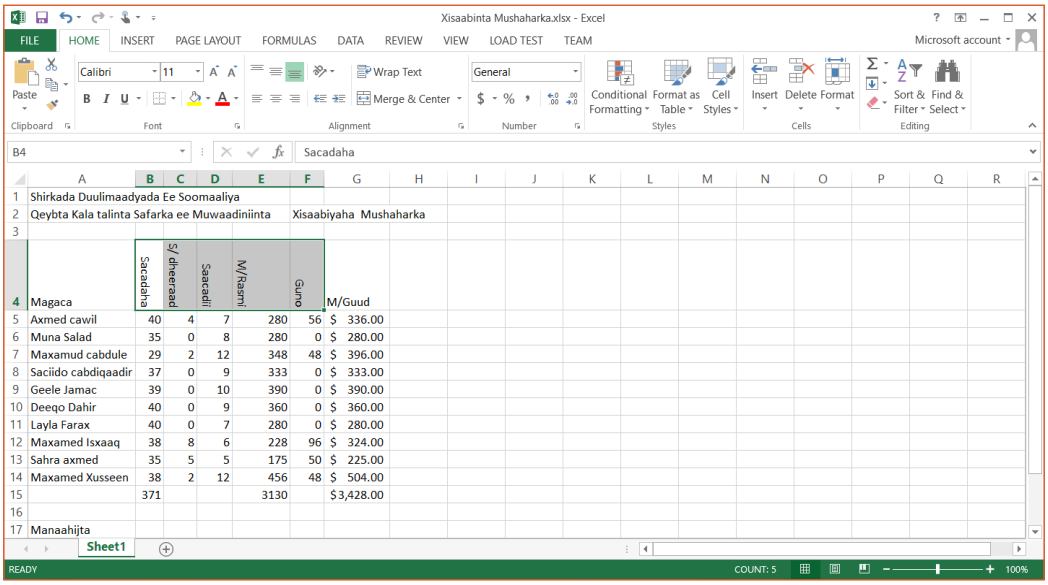


	A	B	C	D	E	F	G
1	Shirkada Duulimaadyada Ee Soomaaliya						
2	Qeybta Kala talinta Safarka ee Muwaadiniinta					Xisaabiyaha Mushaharka	
3							
4	Magaca	Sacadaha	S/ dheeraad	Saacadii	M/Rasmi	Guno	M/Guud
5	Axmed cawil	40	4	7	280	56	$ 336.00
6	Muna Salad	35	0	8	280	0	$ 280.00
7	Maxamud cabdule	29	2	12	348	48	$ 396.00
8	Saciido cabdiqaadir	37	0	9	333	0	$ 333.00
9	Geele Jamac	39	0	10	390	0	$ 390.00
10	Deeqo Dahir	40	0	9	360	0	$ 360.00
11	Layla Farax	40	0	7	280	0	$ 280.00

6. Riix **Ctrl + S.** si aad u kaydisid shaqada aad qabatay

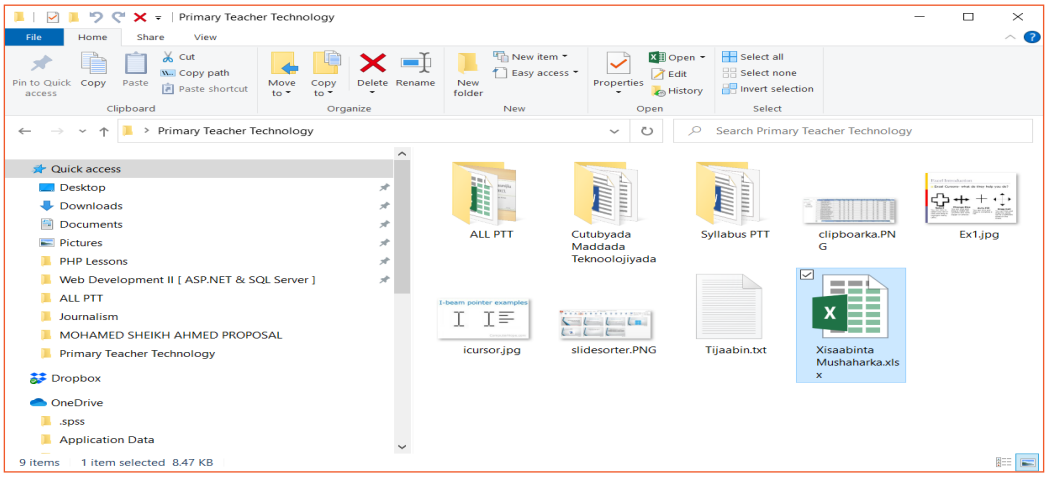
Waxqabadka 1aad:

Soo Saar muqaalka sawirka hoose. Raac talaabooyinka hoose

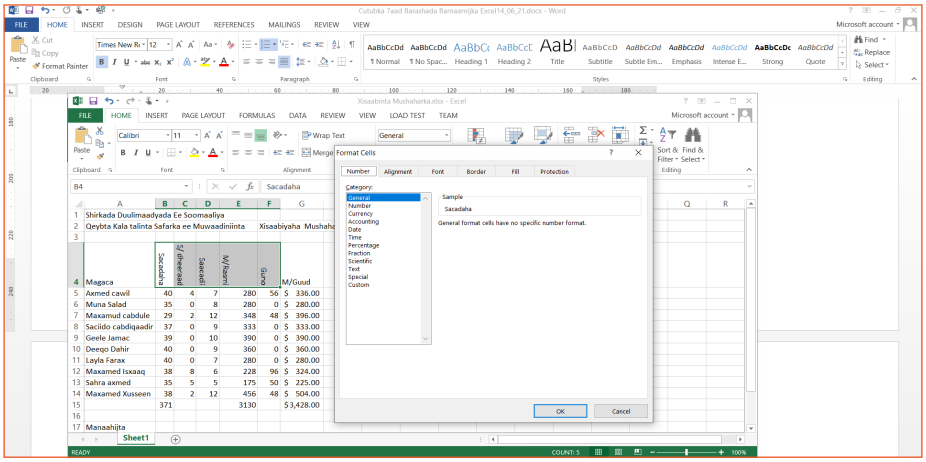


Talaabooyinka:

1. Aad halka uu ka yaallo faylka gudaha kombiyuutarkaaga labo jeer guji "**Xisaabinta Mushahark.xlsx**. Sida ka muuqata sawirka hoose.



2. Dooro baaxadda unugyada(cells) **B4:F4** kadib guji badhanka tirada xisaabiyaha Ka dhig qoraalka joog taxa (column) mid kor u taagan sida ka muuqata sawirka.

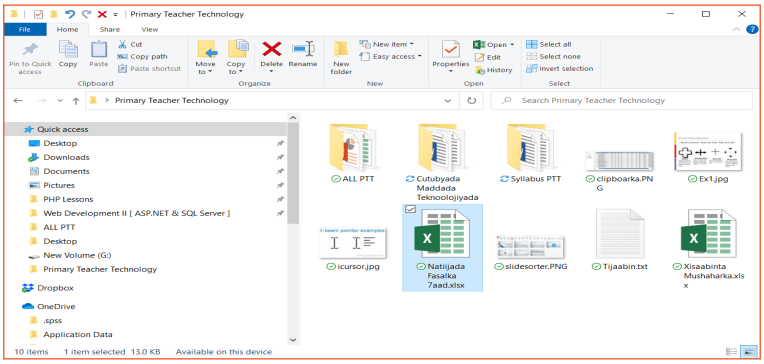


3. Guji Ok.

Beddelida Farta iyo Cabirka Farta (Changing font and font size)

- Farta (font) waxa ay leedahay noocyo badan oo ku kala duwan xagga muuqaalka.
- Cabirka farta (font size): waa midka ka muuqanaya qoraalka. Waxana lagu halbeegaa **1 dhibic (point) = 1/72** oo inji ah (inch).
- Cabirka asalka ah ee barnaamijka Excell waa 11-dhibic ee **Calibri** ah.Raac talaabooyinka hooose si aad u badaeshid farta iyo cabbirkeeda.

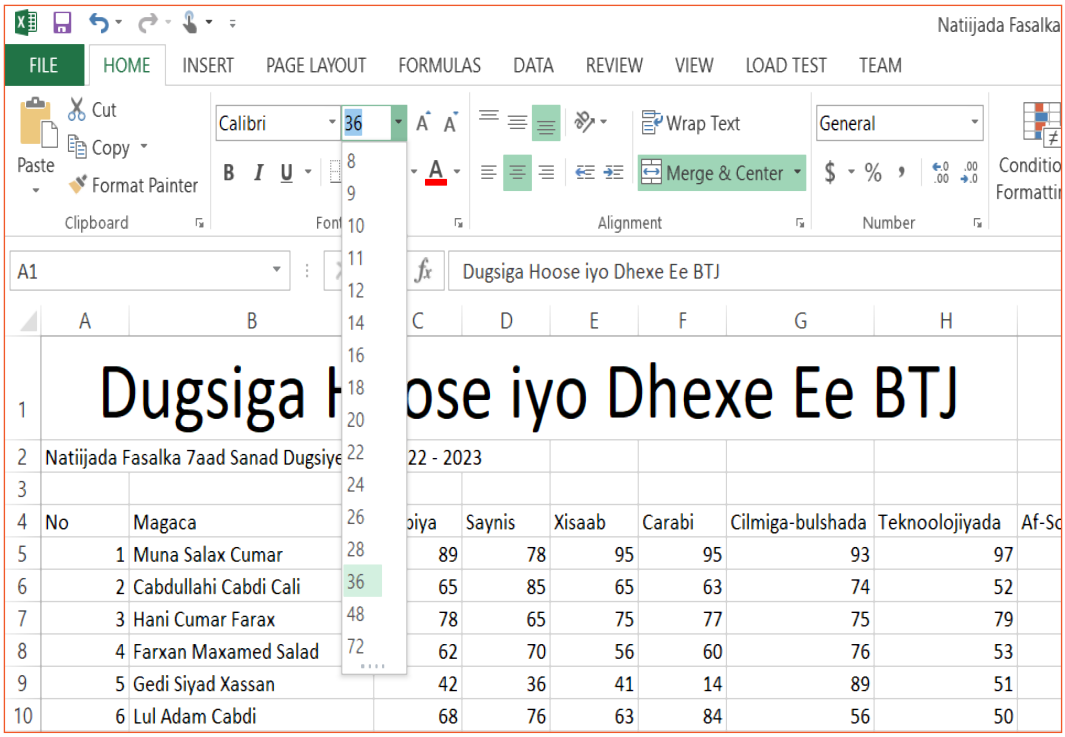
1. Aad halka uu ka yaalo faylka gudaha kombiyuutarkaaga labo jeer guji "**Natiijada Fasalka 7aad.xlsx**. Sida ka muuqata sawirka hoose.



2. Guji unugga (cell) **A1.** Dooro baaxada(range) **A1:L1**

3. Guji carabka **Home**, Kadib guji badhanka isku-darka iyo bartamaha (Merge & Center button) ee kooxda toosinta (alignment group)

4. Guji cabirka farta (font size) oo ku jira kooxda farta (font group) ee carabka Home, ka dib guji **36.** Sid aka muuqata sawirka hoose.

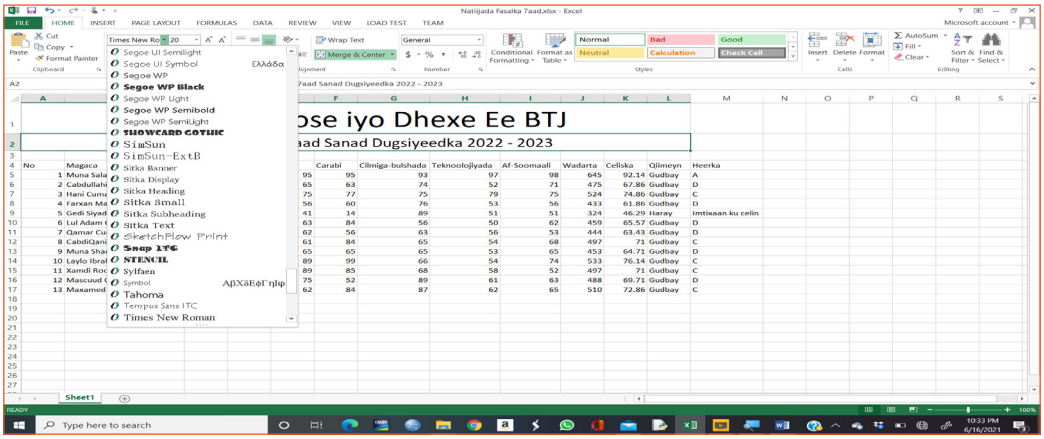


5. Dooro dhowr unug (cell) sida **A2: L2**.

6. Guji carabka **Home**, Kadib guji badhanka isku-darka iyo bartamaha (Merge & Center button) ee kooxda toosinta (alignment group).

7. Guji cabirka farta (font size) oo ku jira kooxda farta (font group) ee carabka Home, ka dib guji **20.** Sid aka muuqata sawirka hoose.

8. Guji liiska farta (font list), kadib guji "**Time New Roman**". Sida sawirka hoose ka muuqata



9. Riix **Ctrl + S** si aad u kaydiso waxqabadkaaga

Waxqabadka 2aad:

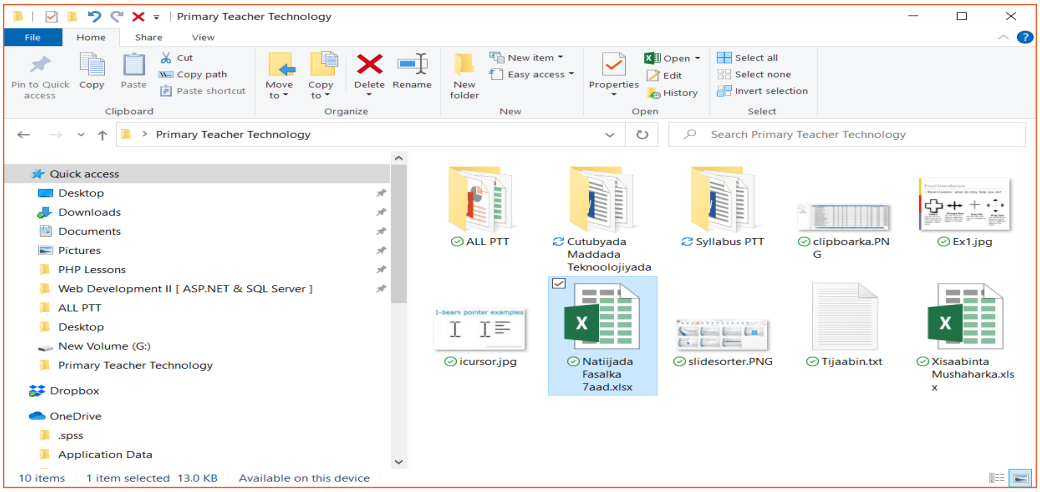
Cilmi – baaris: waxaad raadisaa cabirka farta ugu wayn ee barnaamijka Excelka 2013.

Baddelidda muuqaalka farta (font style) iyo Midibaynta Farta (Color)

- Waxyaabaha habaynta farta la xiriira waxaa ka mid ah sida: farta looga dhigo Tikh (bold), far jeefta (Italic) iyo/ama mid hoos ka xariiqan (underline).
- Toosinta (alignment) ayaa go'aamisa booska xogta unugga lagu qoraya waxa aana ka mid ah: bidix (left), midig (right) ama bartamaha (center).
- Midabaynta Qaabka (Format painter) ayaa kuu oggolaanaya in aad koobiyayso dhammaan astaamaha (attributes) qaabaynta unugyada (cells) la xushay iyo in lagu dabaqo unugyada kale (other cells).

Talaabooyinka

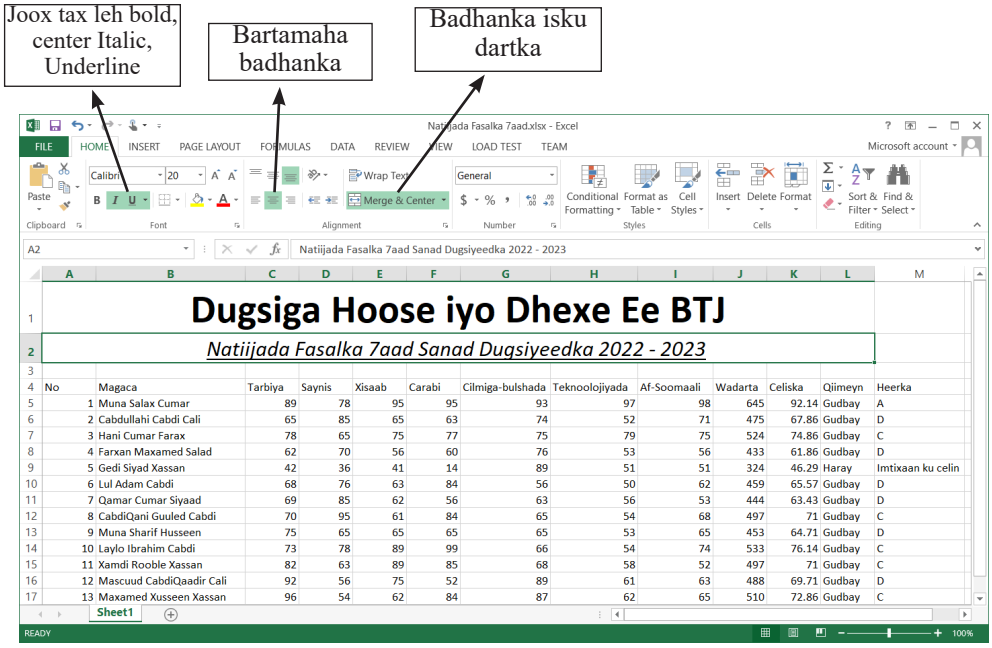
1. Aad halka uu ka yaalo faylka gudaha kombiyuutarkaaga labo jeer guji "**Natiijada Fasalka 7aad.xlsx**. Sida ka muuqata sawirka hoose.



2. Guji unugga (cell) **A1**, guji badhanka tikh (bold) **B** ee kooxda farta ee carabka home.

3. Guji unugga (cell) A2, kadib guji badhanka hoos ka xariiqidda (underline) **U** ee kooxda farta.

4. Guji unugga (cell) **A2** Guji badhanka farta jiifta (italic) *I* ee kooxda farta. Sida sawirka hoose ka muuqata.

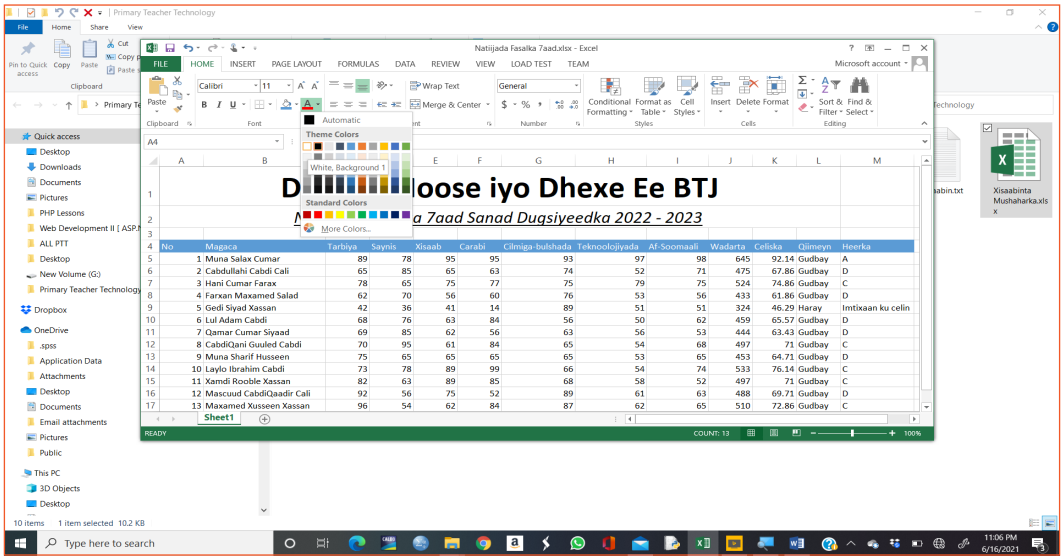


1. Midibaynta unug-yada (cells): Waxaad adeegsan kartaa midabayn kala duwan, si aad sare u qaadid muuqaalka xaashi-hawleeed una fududaato aqrinta qoraalka ku qoran unugyada (cells).

   a. Guji unugga (cell) **A4,** guji badhanka buuxi midabka (fill color list) ee carrabka Home kadib Dooro midanka aad doonayso.

   b. Guji rinjiyaynta Qaabka (Format painter) ee kaydinta yar (Clipboard), kadib dooro baaxada (range) B4:M4. Sida sawirka hoose oo kale.

   c. Dooro baaxada (range) **A4:M4** guji midanka fart Guji unugg(cell) maran. Sida sawirka hoose ka muuqata

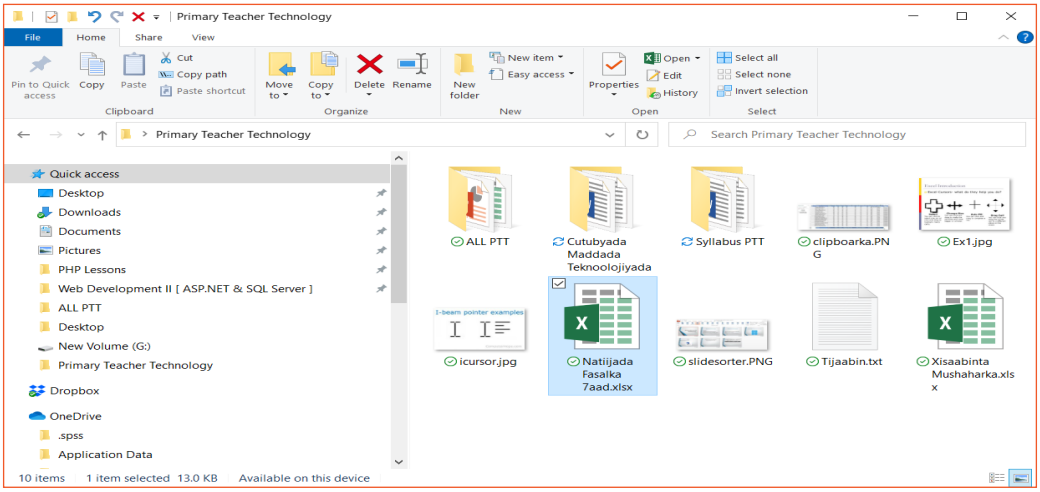


5. Riix **Ctrl + S** si aad u kaydiso waxqabadkaaga

Magac badalidda iyo guurinta xashi-hawleedka

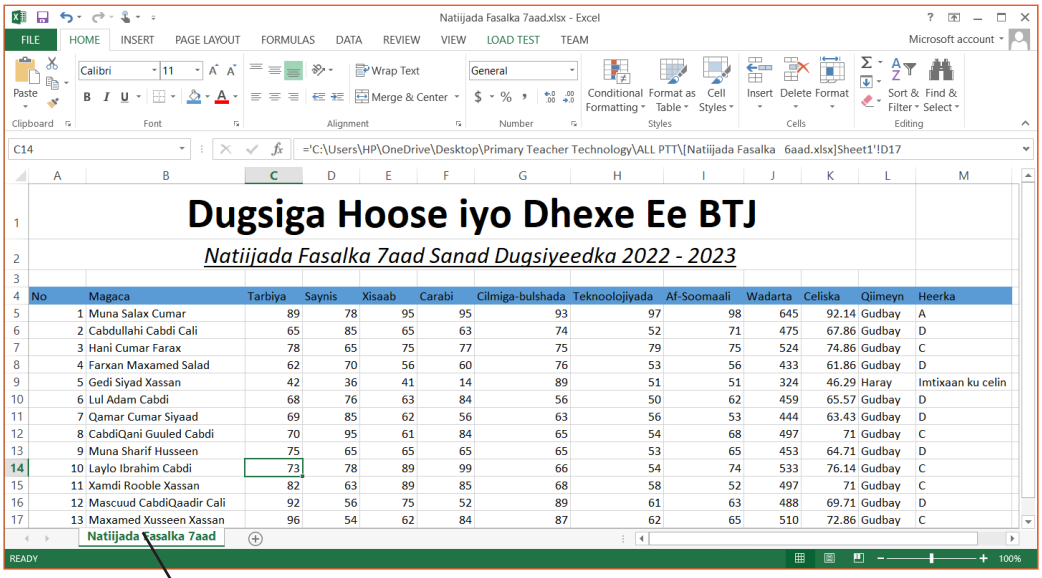
Casharkan waxaa ku baran doona sida loogu soo daro xaashi cusub (new sheet), loo baddelo magaca (rename) iyo sida loo midibayn lahaa xaashida (color sheet). Si aad u tijaabisid howlahaas raac talaabooyinka hoose.

1. Aad halka uu ka yaalo faylka gudaha kombiyuutarkaaga labo jeer guji “**Natiijada Fasalka 7aad.xlsx**. Sida ka muuqata sawirka hoose.



2. Labo jeer guji carabka **Sheet1** ka dib ku qor “Natiijada fasalka 7aad”

3. Guji unug (cell) maran gudaha xaashi-hawleedka



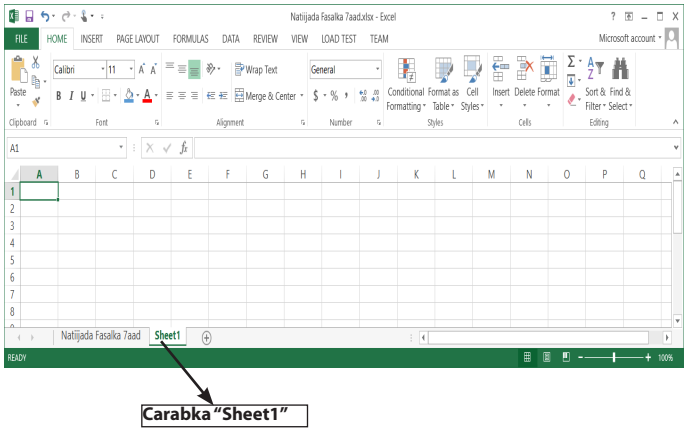
Dugsiga Hoose iyo Dhexe Ee BTJ

Natiijada Fasalka 7aad Sanad Dugsiyeedka 2022 - 2023

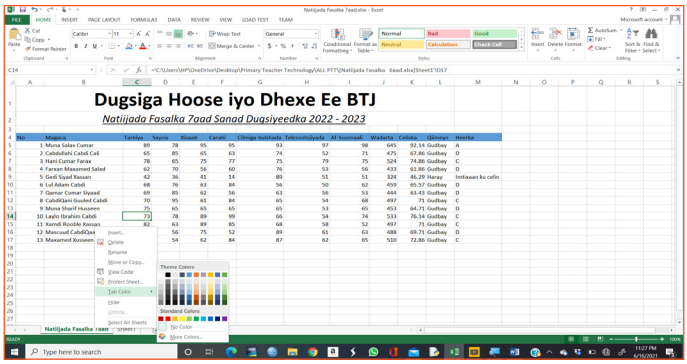
No	Magaca	Tarbiya	Saynis	Xisaab	Carabi	Cilmiga-bulshada	Teknoolojiyada	Af-Soomaali	Wadarta	Celiska	Qiimeyn	Heerka
1	Muna Salax Cumar	89	78	95	95	93	97	98	645	92.14	Gudbay	A
2	Cabdullahi Cabdi Cali	65	85	65	63	74	52	71	475	67.86	Gudbay	D
3	Hani Cumar Farax	78	65	75	77	75	79	75	524	74.86	Gudbay	C
4	Farxan Maxamed Salad	62	70	56	60	76	53	56	433	61.86	Gudbay	D
5	Gedi Siyad Xassan	42	36	41	14	89	51	51	324	46.29	Haray	Imtixaan ku celin
6	Lul Adam Cabdi	68	76	63	84	56	50	62	459	65.57	Gudbay	D
7	Qamar Cumar Siyaad	69	85	62	56	63	56	53	444	63.43	Gudbay	D
8	CabdiQani Guuled Cabdi	70	95	61	84	65	54	68	497	71	Gudbay	C
9	Muna Sharif Husseen	75	65	65	65	65	53	65	453	64.71	Gudbay	D
10	Laylo Ibrahim Cabdi	73	78	89	99	66	54	74	533	76.14	Gudbay	C
11	Xamdi Rooble Xassan	82	63	89	85	68	58	52	497	71	Gudbay	C
12	Mascuud CabdiQaadir Cali	92	56	75	52	89	61	63	488	69.71	Gudbay	D
13	Maxamed Xusseen Xassan	96	54	62	84	87	62	65	510	72.86	Gudbay	C

“Carabka “Natiijada fasalka 7aad

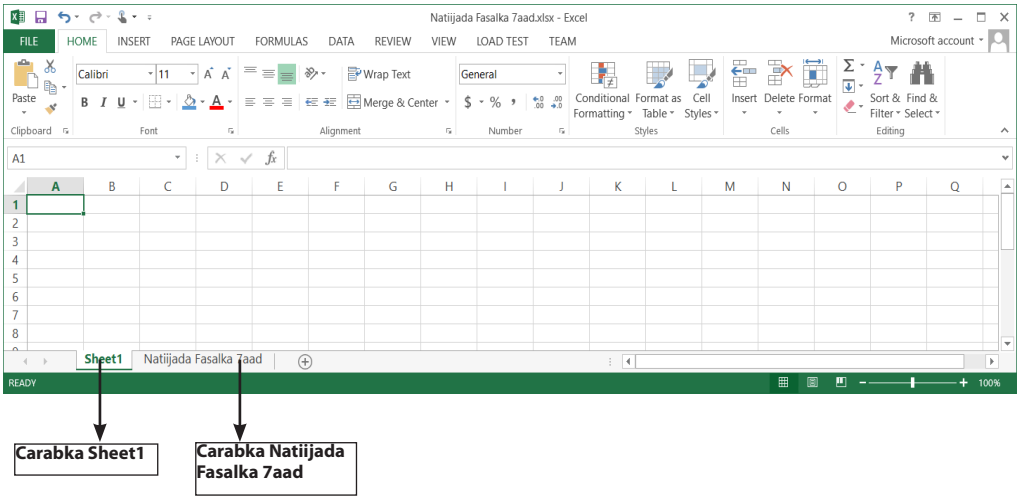
4. Guji astaanta (+) si aad ugu dartid xaashi cusub sida **Sheet2**



5. Guji midig carabka **Natiijada fasalka 7aad**, dooro carabka midibaynta (tab color) kadib guji nooca midabka aad doonaysid



6. Guji carabka Sheet1, qabo badhanka mouse, u guuri dhanka bidix sida kaaga muuqanaysa sawirka hoose.



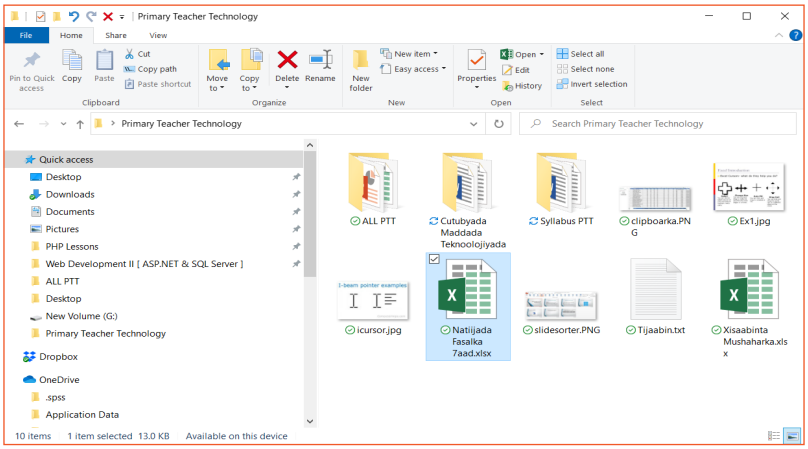
Riix Ctrl + S si aad u kaydiso waxqabadkaaga

Waxqabadka 3aad:

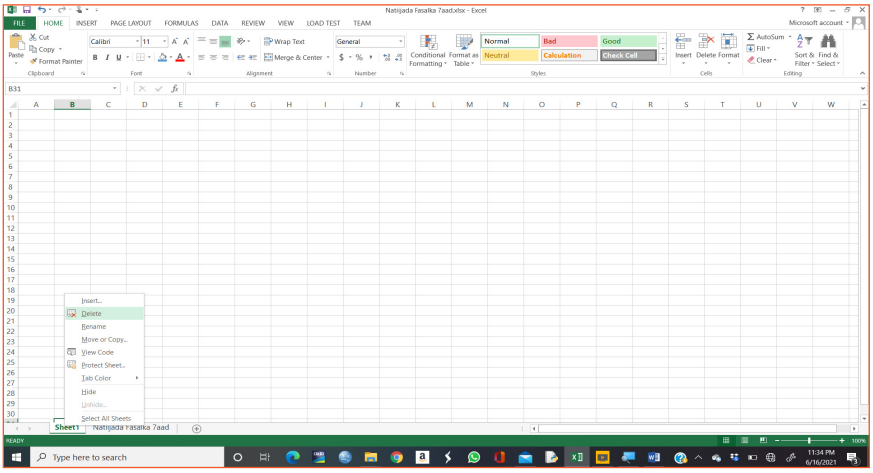
Waxa aad tirtirtaa tirtirto sheet1 ee ka muuqda sawirka hoose

Si aad u soo saartid waxqabadka sawirka hoose ka muuqata xaashida (sheet1) raac talaabooyinka ka hooseeya sawirka

1. Aad halka uu ka yaalo faylka gudaha kombiyuutarkaaga labo jeer guji "**Natiijada Fasalka 7aad.xlsx**. Sida ka muuqata sawirka hoose.



2. Guji midig carabka **Sheet1** kadib Guji Delete si aad u tirtirto sheetka



3. Riix **Ctrl + S si aad u kaydiso waxqabadkaaga**

Casharka 4aad: Jaantusyada (Charts).

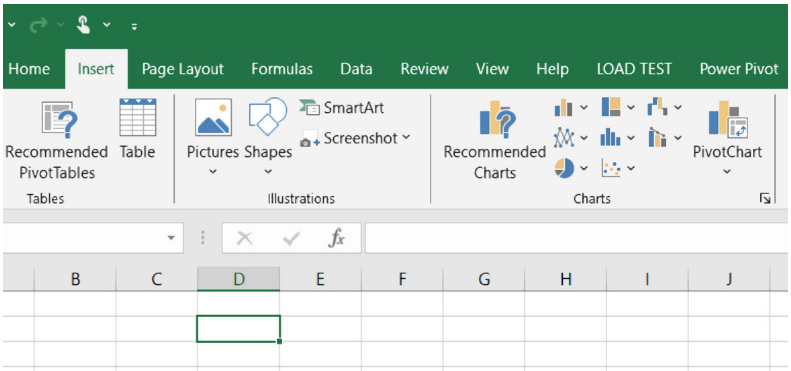
Ujeedooyinka casharka

Dhammaadka casharkan bare-ardaydu waxa ay awood u yeelanayaan in ay:

1. Abuuri karaan jaantus (chart).
2. Rari karaan (move), badeli karaan cabirka jaantuska (resize a chart).
3. Baddeli karaan naqshadda jaantuska (chart design).
4. Habayn karaan jaantustka (chart).

Sameeynta Shax (Chart)

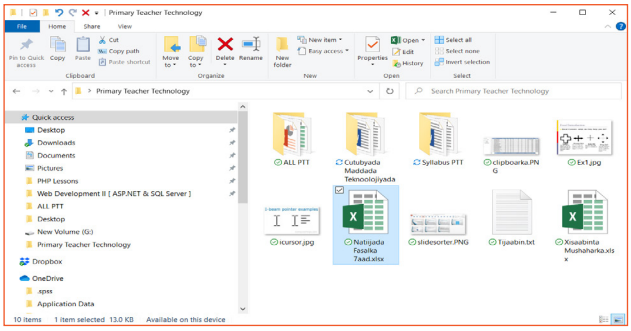
Xaashi-hawleedka (Worksheet) waxa ay leedahay muuqaal soo jiidasho leh kaaso kuu suurtagalinaaya xisaabin iyo habaynta xogta, intaas waxaaa sii dheer xaashi-hawleedka waxaa ku jiraa dhowr nooc oo shax ah (charts). Ka hor inta aadan sameeynin shax (chart) waxaad u baahan tahay in aad qorsheeysid ujeedada aad ka leedahay shaxda, xariirka ka dhexeeya xogta iyo shaxda (chart) iyo xulasho nooc shax (chart) ee ku haboon xogtaada.



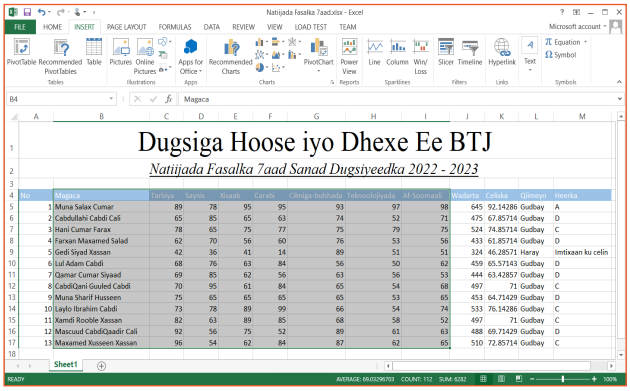
Si aad u samaysid jaantus ama shax ku jira Excel, waxaad marka hore xulanaysaa baaxada (range) unugg-yada (cells) xaashi-hawleedka ay ku jiraan xogta aad rabto inaad shaxda ka samayso. Markaad xulato baaxad, waxaad isticmaali kartaa badhamada ku jira carabka Ribbon si aad u sameeyso shax ku salaysan xogta ku jirta baaxadda.

Haddaba raac talaabooyinka hoose si aad xogtaada ugu samayso shax

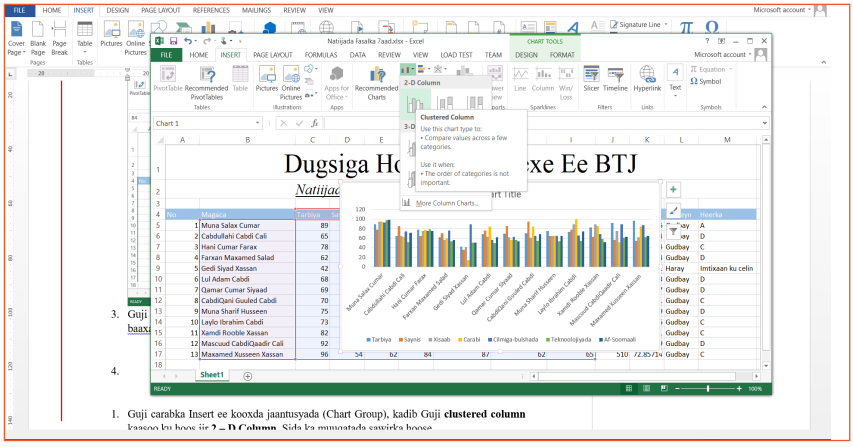
1. Aad halka uu yaalo faylka gudaha kombiyuutarkaaga labo jeer guji "**Natiijada Fasalka 7aad.xlsx**. Sida ka muuqata sawirka hoose.



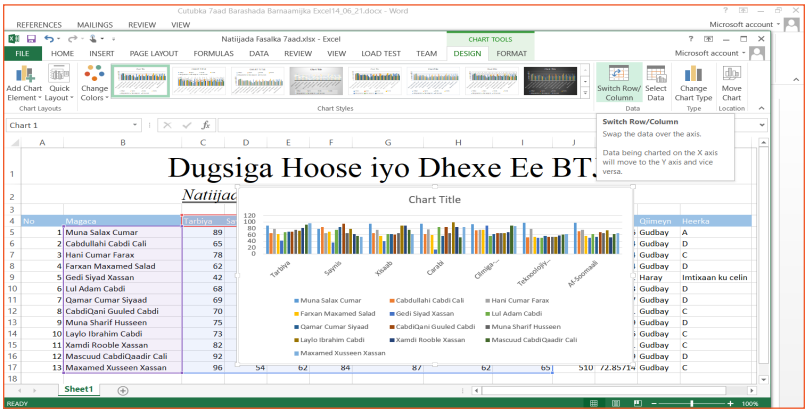
2. Dooro baaxadda (range) **B4: I17.** Sida ka muuqata sawirka hoose



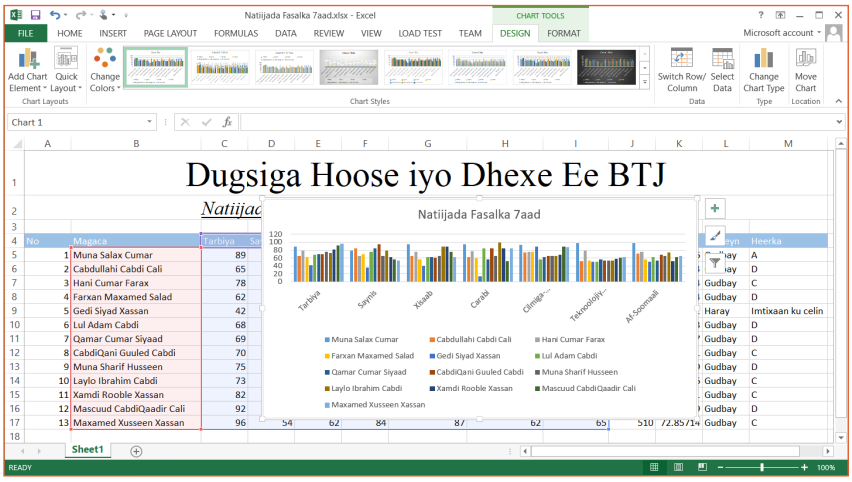
3. Guji carabka **Insert** ee kooxda shaxda (chart) dooro nooca shaxda (chart) ku haboon baaxada (range) xogta aad dooratay. Guji **clustered column** kaasoo ku hoos jir **2 – D Column**. Sida sawirka hoose oo kale



4. Guji carabka **Design** ee kooxda xogta, guji u wareeg jiif-tax/joog-tax (**Switch Row/Column**). Sawirka hoose waxaad ku arki doontaa jiif-taxa (row) in uu u wareegay joog-taxa (column).



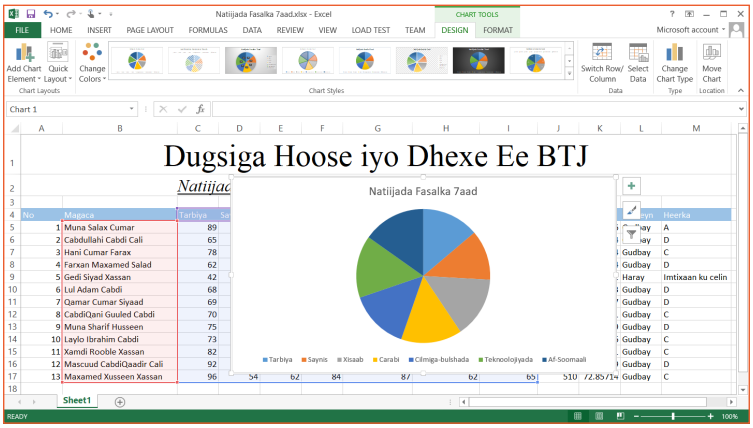
5. Baddel ciwaanka shax (chart) labo jeer Guji Chart Title kadib qor "**Natiijada Fasalka 7aad**" sida sawirka hoose.



6. Beddeli naqshada shaxda (chart) raac talaabooyinka hoose:

   a. Guji midig (right click) qaybta sare ee shaxda (chart) dushiisa, kadib guji beddel nooc shaxda (Change Chart Type). Dooro shaxda aad rabto sida sawirka ka muuqata.

   b. Guji Ok.



7. Riix **Ctrl + S.** Si aad u keydiso shaqada aad qabatay

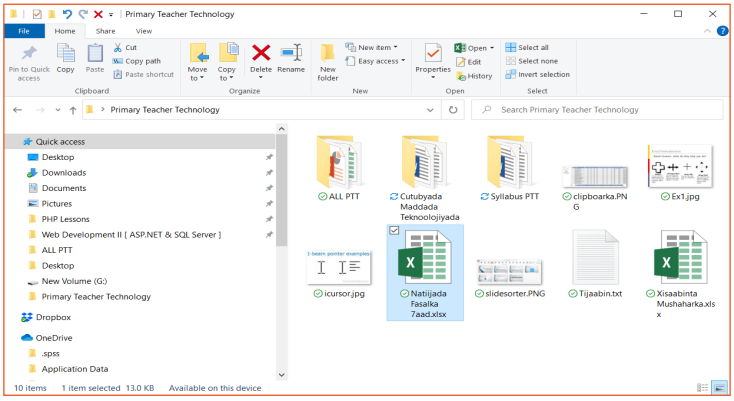
Waxqabadka 1aad:

Cilmi-baaris: Raadi imisa nooc ayuu u qeybsamaa shaxda (chart) ee barnaamijka Excel iyo xiliyada ay ku haboon yihiin in la adeegsado.

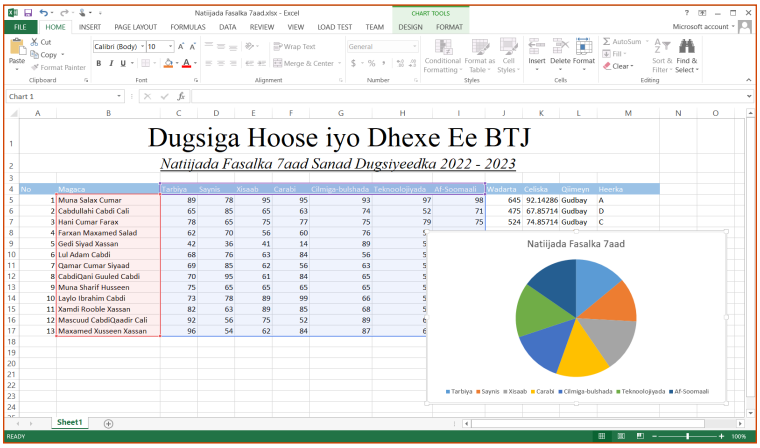
Raridda iyo dib u Habaynta Shaxda (chart)

Shaxda (chart) waa shay ka madax banaan xaashi-hawleedka (worksheet) mar haddii la sameeyo kuma xirna unugga (cell) or baxaada unug-yada (range cells). Sidaas daraateed waa rari kartaa wana habayn kartaa shaxda. Raac talaabooyinka hoose si aad u rartid (move) shaxda.

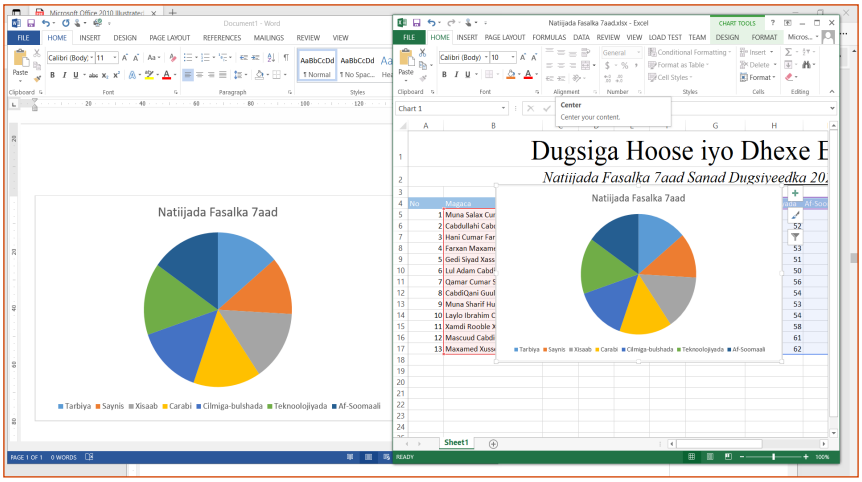
1. Aad halka uu ka yaalo faylka gudaha kombiyuutarkaaga labo jeer guji "**Natiijada Fasalka 7aad.xlsx**. Sida ka muuqata sawirka hoose.



2. Si aad u guuriso shaxda (chart) Guji shaxda (chart), kadibn u guuri (move) halka aad dooneysid adigoo jiidaya hagaha mouse-ka. Sida ka muuqata sawirka hoose.

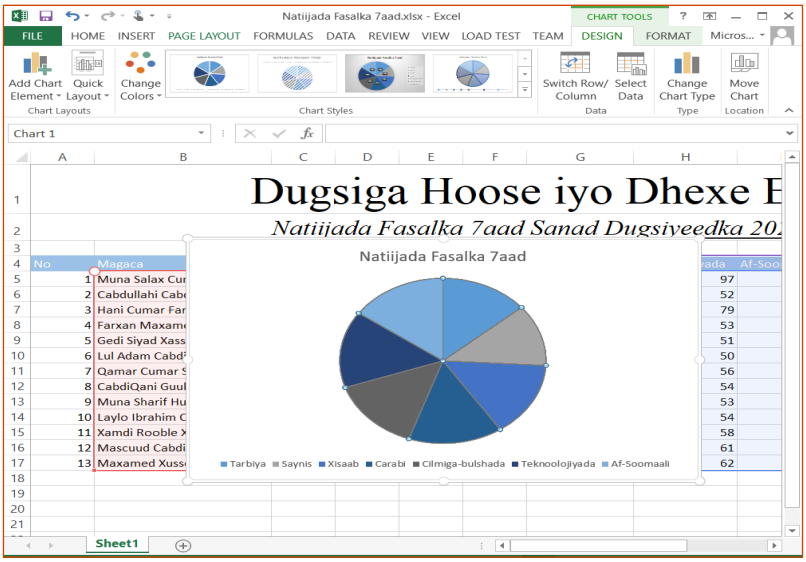


3. Guji shaxda (chart), hal mar riix furaha **Ctrl + C.** Si aad ugu rarto (move) barnaamijka Ms Word 2013. Sida ka muuqata sawirka hoose.

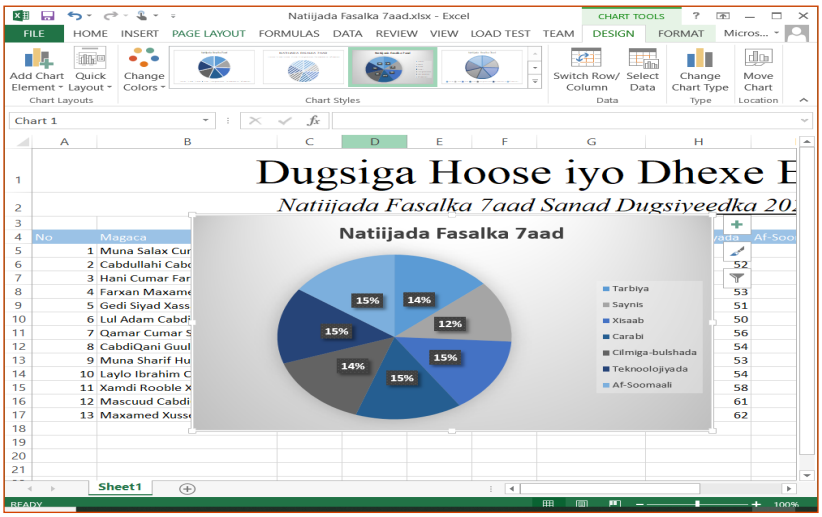


4. Qaabaynta shaxda (chart) waxa ay sahlaysaa akhriska iyo fahamka. Qaar badan oo ka mid ah qaabaynta ayaa la sameyn karaa iyadoo la isticmaalayo carabka **format**. Raac talaabooyinka hoose si aad u habayso shaxda (chart).

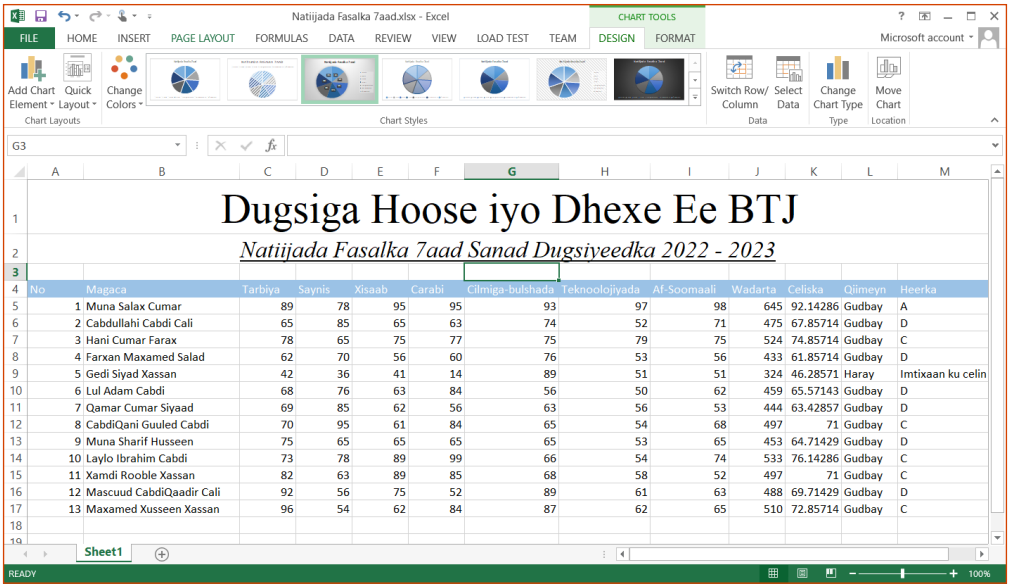
a. Guji shaxda (chart), Guji carabka **Design** ee Ribbonka**.** Guji beddel midabka (Change Color). Dooro midabka aad doonto. Sida sawirka hoose ka muuqata.



b. Dooro shaxda (chart) Guji carabka Design ee Ribbonka aad qeybta qaab dhismeedka diyaarsan (Chart Style). Sida ka muuqata shaxda hoose.



5. Tirtir haddii aad rabto shaxda, sida aad u tirtirto raac talaabadan. Guji shaxda (chart) kadib riix furaha tirtirada ee looxada kombiyuutarka (Del key). Sida ka muuqata sawirka hoose.



Dugsiga Hoose iyo Dhexe Ee BTJ

Natiijada Fasalka 7aad Sanad Dugsiyeedka 2022 - 2023

No	Magaca	Tarbiya	Saynis	Xisaab	Carabi	Cilmiga-bulshada	Teknoolojiyada	Af-Soomaali	Wadarta	Celiska	Qiimeyn	Heerka
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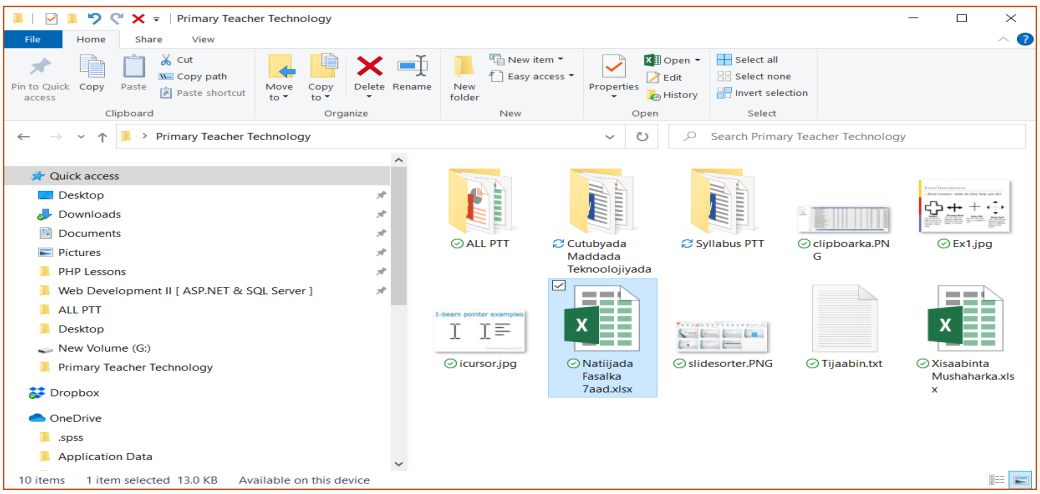
2	Cabdullahi Cabdi Cali	65	85	65	63	74	52	71	475	67.85714	Gudbay	D
3	Hani Cumar Farax	78	65	75	77	75	79	75	524	74.85714	Gudbay	C
4	Farxan Maxamed Salad	62	70	56	60	76	53	56	433	61.85714	Gudbay	D
5	Gedi Siyad Xassan	42	36	41	14	89	51	51	324	46.28571	Haray	Imtixaan ku celin
6	Lul Adam Cabdi	68	76	63	84	56	50	62	459	65.57143	Gudbay	D
7	Qamar Cumar Siyaad	69	85	62	56	63	56	53	444	63.42857	Gudbay	D
8	CabdiQani Guuled Cabdi	70	95	61	84	65	54	68	497	71	Gudbay	C
9	Muna Sharif Husseen	75	65	65	65	65	53	65	453	64.71429	Gudbay	D
10	Laylo Ibrahim Cabdi	73	78	89	99	66	54	74	533	76.14286	Gudbay	C
11	Xamdi Rooble Xassan	82	63	89	85	68	58	52	497	71	Gudbay	C
12	Mascuud CabdiQaadir Cali	92	56	75	52	89	61	63	488	69.71429	Gudbay	D
13	Maxamed Xusseen Xassan	96	54	62	84	87	62	65	510	72.85714	Gudbay	C

6. Riix furuaha **Ctrl + S**.

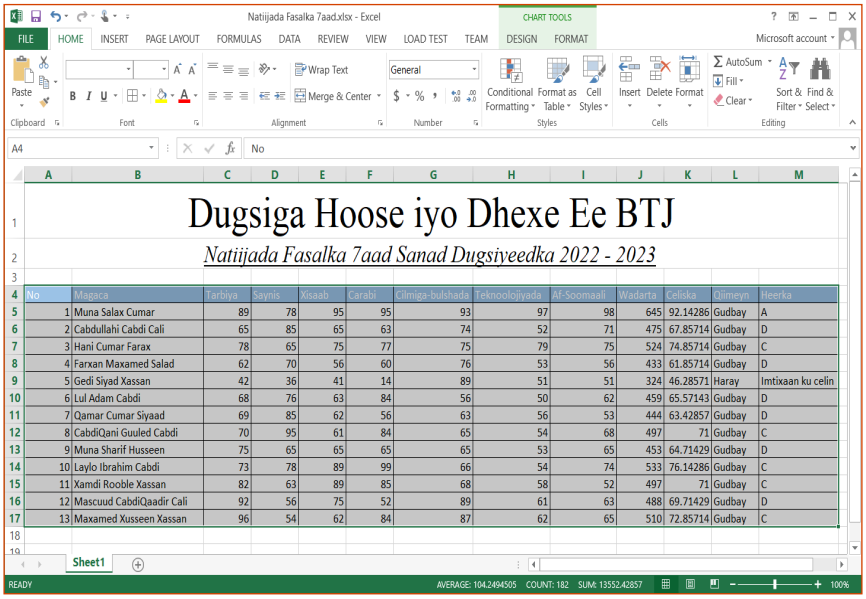
Waxqabadka 2aad:

Raac talaabooyinka hoose si aad u xadaysid (border) xaashi-hawleeedka (Worksheet), taasi waxa ay kuu suurtagalinaysaa in xaashi-hawleedka (worksheet) yeesho muuqaal jadwal ah. Sida sawirka hoose ka muuqata.

1. Aad halka uu ka yaalo faylka gudaha kombiyuutarkaaga labo jeer guji "**Natiijada Fasalka 7aad.xlsx**. Sida ka muuqata sawirka hoose.



2. Midibee (Highlight) baaxada (ranage) **A4:M17** Guji carabka **Home** ee kooxda farta (font group), guji badhanka xuduuda (border) Sida sawirka hoose ka muuqda.



3. Riix **Ctrl + S** si aad u kaydiso waxqabadkaaga

Gunaanadka Cutubka

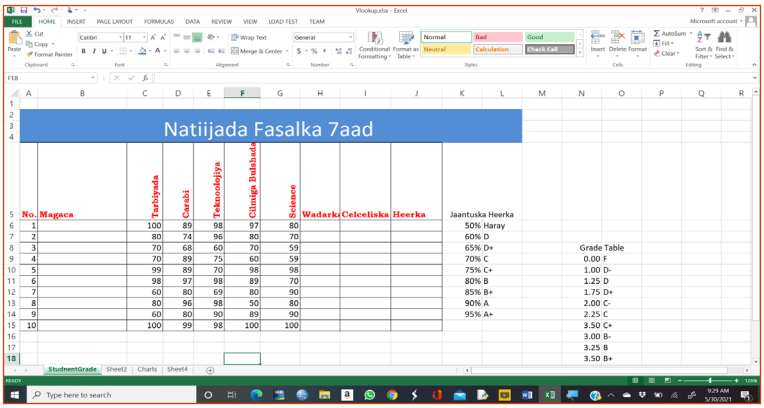
Cutubkaan waxa aan ku soo barannay

- Faham guud ee ku saabsan barnaamijka Excel 2013.
- Fahamka qaacidooyinka (formalus) ee barnaamijka Excel 2013.
- Galinta summadaha iyo qiimayaasha adigoo isticmaalaya Badhanka **Sum**.
- Tafatirka unugyada (Cells) ee xaashi-hawleedka.
- Galinta iyo tafatirka qaacidooyinka fudud (simple formula).
- U kal wareegida muuqalada(views) xaashi-hawleedka
- Daabacida xaashi-hawleedka.
- Abuuridda qaacidooyinka adag(complex formula)

- Galinta iyo qorista fansaar (function)
- Koobiyaynta iyo raridda unugga(cell)
- Kala saarida unugyada (cell), unugyada xariira (relative cell reference) iyo unugyada sugan (absolute cell references).
- Soo koobidda (round) tiriyooyinka jajab tabanle ayadoo la adeegsanaayo fansaar (function).
- Habaynta qiimaha (value) ku jira unugga (cell) xaashi-hawleed.
- Baddelida farta (font) iyo cabirka farta (fonta size).
- Baddelida qaabka farta (font style) iyo toosinta farta (alignment).
- Saxidda ballaca joog taxa (column).
- Galinta iyo tirtiridda jiif taxa (row) iyo joog taxa (column).
- Midabynta unugyada(cells) xaashi – hawleedka
- Magacaabista iyo rarida xaashi- hawleedka
- Abuurista jaantus(chart)
- Raridda iyo dib u habaynta jaantuska (chart).
- Baddelida muuqaalka jaantuuska (chart).
- Tirtirda jaanjuusta (chart).

Qiimaynta Cutubka

1. Sawirka hoose adigoo eegaya ka jawaab waydiimaha ka hooseeya.



Natiijada Fasalka 7aad

No.	Magaca	Tarbiyada	Carabi	Tekxoolojiya	Cilmiga Bulshada	Science	Wadarta	Celceliska	Heerka
1		100	89	98	97	80			
2		80	74	96	80	70			
3		70	68	60	70	59			
4		70	89	75	60	59			
5		99	89	70	98	98			
6		98	97	98	89	70			
7		60	80	69	80	90			
8		80	96	98	50	80			
9		60	80	90	89	90			
10		100	99	98	100	100			

Jaantuska Heerka
50% Haray
60% D
65% D+
70% C
75% C+
80% B
85% B+
90% A
95% A+

Grade Table
0.00 F
1.00 D-
1.25 D
1.75 D+
2.00 C-
2.25 C
3.50 C+
3.00 B-
3.25 B
3.50 B+

a. Isticmaal saddax joog tax(columns)

b. Waxaad u bixisaa "Xisaab", "Af-soomaalia" iyo Ingiliish. Sidii dhibco

c. U habee qoraalka (text alignment) qaab joog ah sida kuwa kale ay yihiin.

d. Ku samayee Wadarta dhibcaha maaddooyinka unugga (cell) H6 kadib, ku koobiyee baaxada (range) H7:H15.

e. Ka samee Celceliska dhibcaha maaddooyinka unugga (cell) I6 kadib, ku koobiyey baaxada (range) I7:I15.

f. Abuur "Heerka Ardayga" unugga (Cell) J6 kadib ku koobiyee baaxada J7:J15. Adigoo adeegsanaya jadwalka dhanka midig yaalla

g. Abuur unuga ma guuraan (absolute cell reference) sida: $K$6 iyo $L$14

h. Ku abuur qaacidan (formula):

=VLOOKUP (I6,$K$6:$L$14,2) unugga (cell) J6.

2. Abuur jaantus (chart) adigoo dooranaaya dhammaan unugyada (cells)

a. Guji carrabka Insert ee kooxda jaantus (chart), kadib dooro nooca jaantuska (char) aad doonayso.

b. Abuur jaantus (chart) nooc 3 – D adigoo ka dooranaya Jaantus (Pie chart).

Hordhaca Cutubka

Robots waa aalado casri ah oo leh karti ay ku fuliyaan hawlo kala duwan iyadoo loo adeegsanayo barnaamijyo gaar ah. Waxay door weyn ka ciyaaraan warshadaha, caafimaadka, waxbarashada, iyo nolol maalmeedka. Cutubkan wuxuu bixinayaa faham qoto dheer oo ku saabsan robots, qeybaha ay ka kooban yihiin, iyo sida ay u shaqeeyaan. Waxa kale oo la baran doonaa noocyada kala duwan ee robots iyo luqadaha loo isticmaalo barnaamijyadooda.

Ujeeddooyinka Cutubka

Dhammaadka cutubkan bare-ardaydu waxa ay awood u yeelanayaan in ay :

1. Gartaan qeybaha kala duwan ee robots sida sensors, aruurinta macluumaadka, iyo motoorka dhaqdhaaqa.
2. Sharaxida goobaha kala duwan ee robots loo isticmaalo iyo faa'iidooyinkooda.
3. Fahamka sida robots u isticmaalaan camero, sonar, iyo touch sensors.
4. Barashada luqadaha barnaamijka ee robots.
5. Ku shaqaysiinta iyo rakibida robots.

Tusmada Cutubka

Casharka 1aad: Hordhaca iyo tariikhda Robot-yada.

Casharka 2aad: Noocyada Robot-yada ee Loo Isticmaalo Nolosha.

Casharka 3aad: Qeybaha iyo Luuqadaha Barnaamijka ee Robots

Habka Waxbaridda

- **Sharaxaad (Fasiraad Macallin)**
  Casharka waxa uu ku bilaabanayaa sharaxaad guud oo macallinku ka bixinayo robot-yada, taariikhdooda, muhiimadooda, iyo doorkooda nolosha maanta.

- **Dood ku saabsan noocyada kala duwan ee Robots**
  Kadib sharaxaadda, ardayda waxaa lagu dhiirrigelinayaa dood furan oo ay ku falanqeeyaan noocyada kala duwan ee robot-yada, sida kuwa caafimaadka, ganacsiga, dagaalka, iwm.

- **Koox-koox Isku Weydiin & Dood Kooxeed**
  Ardayda waxay u kala baxayaan koox-koox si ay u falanqeeyaan mowduuca, su'aalo isku waydiiyaan, kana doodaan sida ay robot-yadu u saamayn karaan nolosha.

- **Akhrinta Buugaag Dheeraad ah**
  Koox kasta waxaa la siinayaa qoraal kooban ama buug yar oo la xiriira mowduuca si ay u akhriyaan, ugana helaan faham dheeraad ah.

- **Muuqaalo (Daawasho Video)**
  Ardayda waxa la tusayaa muuqaallo ku saabsan shaqada robot-yada, sida loo dhiso, noocyada kala duwan, iyo ficilladooda dhabta ah ee dunida.

- **Tusin (Practical)**
  Macallinku wuxuu tusinayaa sida qaybo ka mid ah robot-yadu u shaqeeyaan – tusaale ahaan, matoorrada (motors), dareemayaasha (sensors), ama kontaroolayaasha (controllers).

- **Furfurid iyo Xirxirid Qalab Robot-ka ah**
  Haddii qalab robot la heli karo, ardayda waxa loo oggolaanayaa inay furfuraan robot dhisan oo markaas dib u xirxiraan, si ay u helaan khibrad dhab ah.

- **Su'aalo iyo Jawaabo (Fahamka La Xaqiijiyo)**
  Ugu dambayn, su'aalo iyo jawaabo ayaa lagu sameeyaa fasalka si loo hubiyo fahamka ardayda, loona dhiirrigeliyo ka-qaybgal iyo xasuus.

Casharka 1aad

Hordhaca Robots

Su'aal:

- Waa maxay robot, sideese u shaqeeyaan?
- Sidee ayaa robots uga qayb qaataan nolosha bini'aadamka?

Ujeeddooyinka Casharka

- Gartaan macnaha robots iyo taariikhda horumarkooda.
- Dood ka sameeyaan faa'iidooyinka iyo caqabadaha ay robots ku keenaan bulshooyinka

Sharaxaada Casharka

Casharkan wuxuu ku bilaabanayaa hordhaca robots, taariikhda horumarkooda, iyo sida ay u shaqeeyaan. Waxa kale oo lagu baran doonaa qeybaha ugu muhiimsan ee robot, sida processor, sensors, actuators, iyo software. Waxa kale oo ardaydu baran doonaan noocyada robots ee kala duwan sida warshadaha, caafimaadka, iyo adeegyada bulshada.

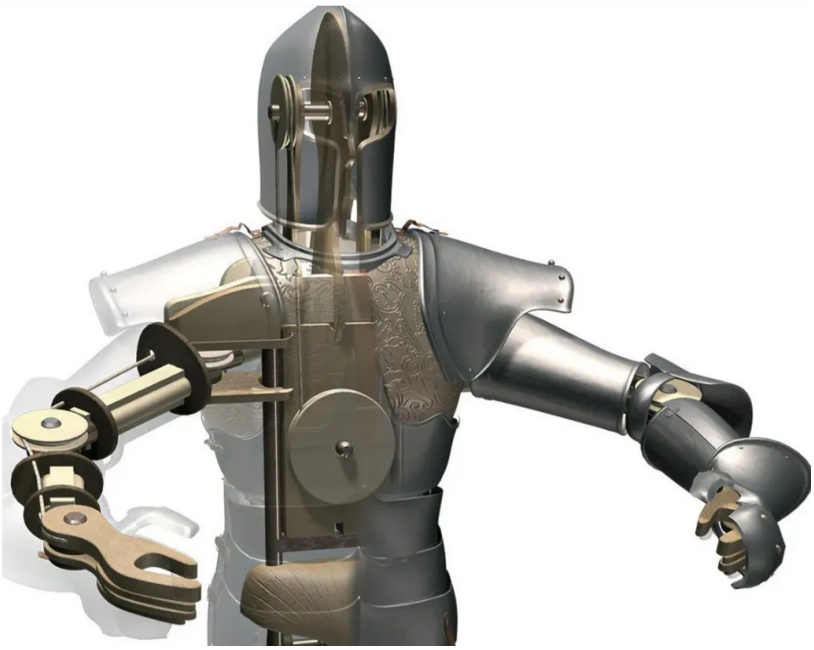
Waa maxay Robot?

Robots waa aalado casri ah oo lagu dhisay teknolojiyad horumarsan si ay u fuliyaan hawlo kala duwan, iyadoo loo adeegsanayo barnaamijyo gaar ah iyo qalab farsamo. Waxay door muhiim ah ka ciyaaraan warshadaha, caafimaadka, waxbarashada, iyo nolol maalmeedka. Robots waxay caawiyaan bini'aadamka iyagoo sameynaya hawlo halis ah, daal badan, ama u baahan saxnaan sare.

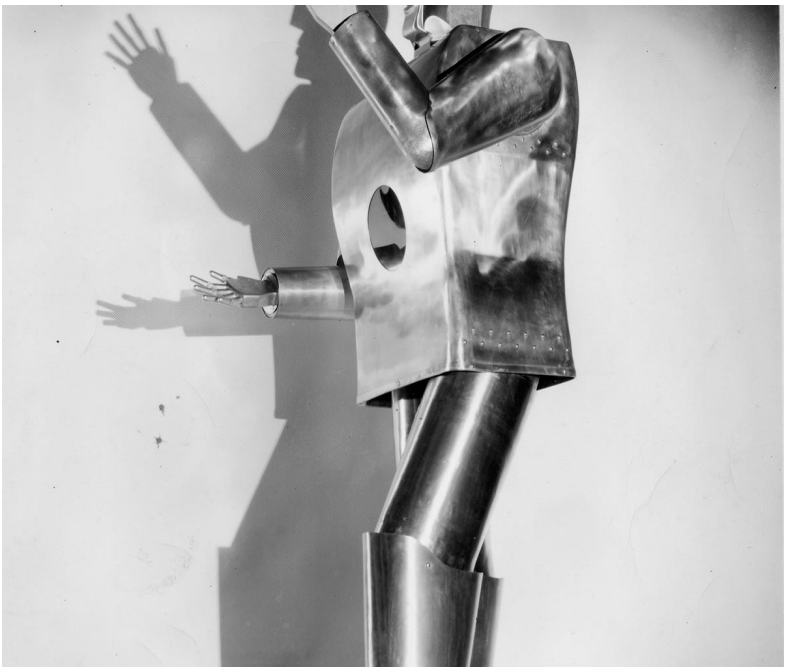
Taariikhda Horumarka Robots

Fikradda robot-ka waxay soo jirtay qarniyo badan, balse horumarkooda casriga ah wuxuu bilowday qarnigii 20aad. Taasoo dunida ay fahmaan sida Robot-ku ugu caawin karo waxyaabo badan.

- Qarnigii 15aad – Leonardo da Vinci wuxuu naqshadeeyay aalad u eg robot oo leh qaab shaqeyn kara.



- **1939** – Robot-kii ugu horreeyay ee casri ah, Electro, ayaa lagu soo bandhigay New York World's Fair.



- 1956 – George Devol iyo Joseph Engelberger waxay sameeyeen shirkaddii ugu horreysay ee soo saarta robots warshadeed.

- 1961 – Unimate wuxuu noqday robot-kii ugu horreeyay ee si rasmi ah uga shaqeeya warshad (General Motors).

- **1980-meeyadii – Robots waxay noqdeen kuwo aad u horumarsan oo la adeegsado warshadaha, caafimaadka, iyo cilmi-baarista.**

- **2000-meeyadii ilaa maanta** – Robots ayaa noqday kuwo aad u casri ah, oo leh caqli macmal ah (AI), dareemayaal (sensors), iyo karti is-barasho.

Waxqabadka 1aad:

Cilmi – baaris waxa aan soo baareynaa dowladii ugu horeysay ee soo saartay Robot-ka iyo waxa ay u adeegsadeen

Waxqabadka 2aad:

Waxa aan ka dooneynaa robot-ka iyo waxa uu yahay caqliga macmalka (AI)

Gunaanadka Casharka

Robots waa qalab casri ah oo horumar weyn ka sameeyay dhinacyo badan oo nolosha ah. tariikh ahaan waxa uu soo bilaawday goor hore, dadku waxa ay garteen waxtarka u lee yahay Robot-ka.

Layli

- Waxa aan wax ma ka soo qoreyaa sida uu shaqeeyo robot-ka lagu magacaabo Safiya.
- Kuma loo yaqaanaa aabaha Robot-ka

Casharka 2aad

Noocyada Robot-yada ee Loo Isticmaalo Nolosha

Su'aal: Sheeg noocyada Robot-ka ee laga helo wadankeen iyo waxa loo adeegsado

Ujeeddooyinka casharka

1. Kala soocidda noocyada kala duwan ee robots.
2. Gartaan doorka robot-yadu ku leeyihiin qeybaha kala duwan ee nolosha.

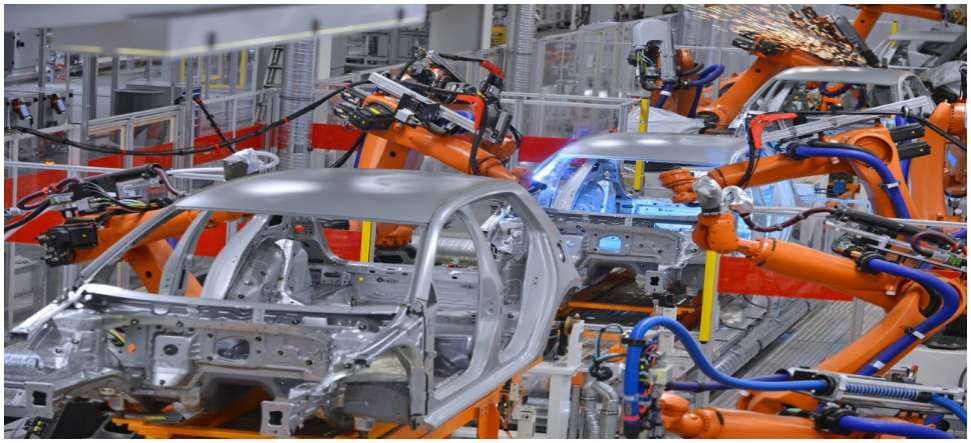
Sharaaxada casharka

Robot-yadu waxay noqdeen qeyb muhiim ah oo ka mid ah horumarka farsamada casriga ah, iyaga oo ka caawinaya bini'aadamka in la hagaajiyo wax-soosaarka, la wanaajiyo nolol maalmeedka, loona fududeeyo hawlaha adag. Waxay ka shaqeeyaan warshadaha, caafimaadka, waxbarashada, ammaanka, iyo meelo kale oo badan. Robots waxay leeyihiin sirdoon macmal ah (AI), dareemayaal, iyo mashiinno si ay u qabtaan hawlaha si sax ah, xawaare leh, oo badbaado leh. Hoos waxaan ku eegi doonnaa qeybaha ugu waaweyn ee robot-yada loo isticmaalo, ka dibna mid walba waxaan si gaar ah u faahfaahin doonnaa:

Warshadaha iyo Wax-soosaarka

Robot-yada warshaduhu waa mashiinno si toos ah u shaqeeya oo ka caawiya shirkadaha wax-soo-saarka iyo farsamaynta qalabka kala duwan. Waxaa ka mid ah Robot-yada warshaduhu.

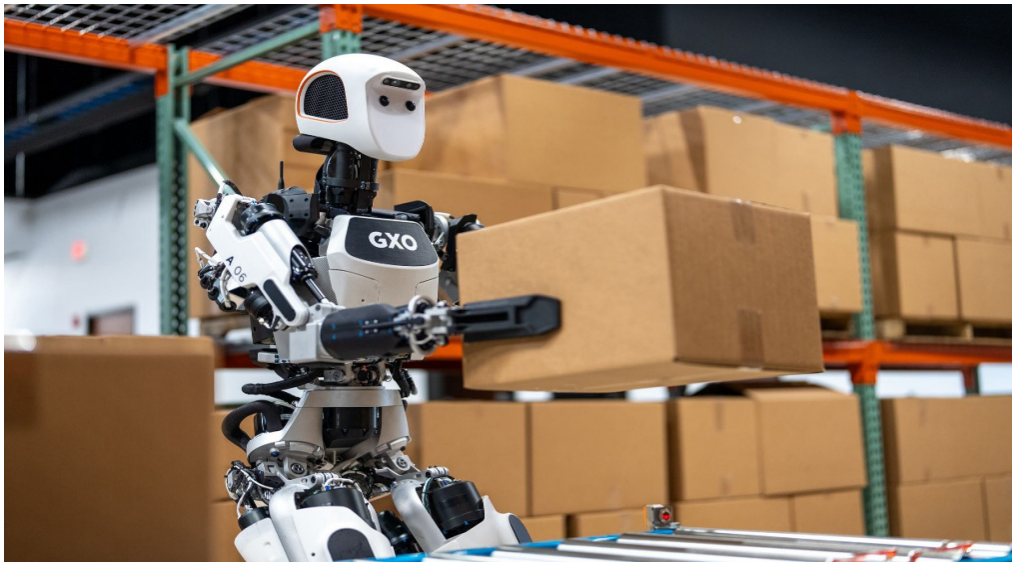
- **Warshadaha Gawaarida** – Isku-xirka iyo alxanka baabuurta.



- **Warshadaha Korontada** – Samaynta qalabka korontada sida solar ka iyo fiilooyin ka.

- **Warshadaha Shidaalka** – La socodka dhuumaha iyo dayactirka qalabka culus.

- **Warshadaha Baakadaha** – Rarista iyo kala soocidda badeecadaha.

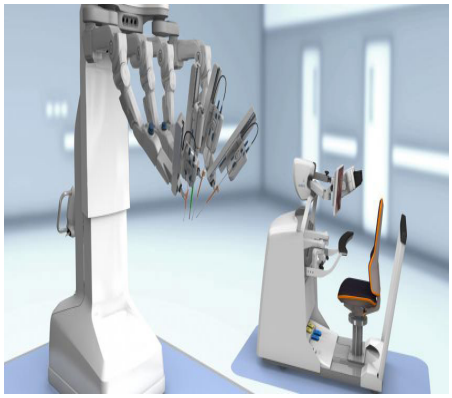


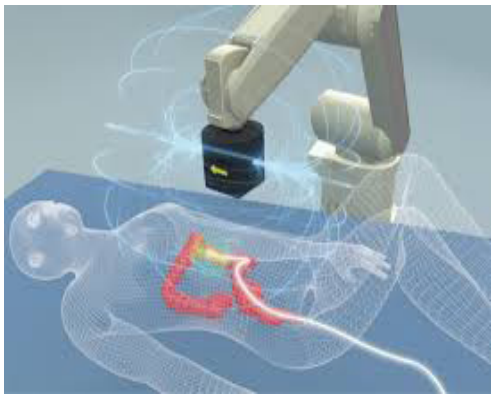
Caafimaadka

Robot-yada caafimaadku waa qalab casri ah oo loo isticmaalo in lagu horumariyo adeegyada caafimaadka, iyadoo la taageerayo shaqaalaha caafimaadka sida dhakhaatiirta, kalkaaliyayaasha, iyo shaqaalaha kale ee isbitaallada. Robot-yadani waxay qabtaan shaqooyin kala duwan, taasoo sare u qaadda tayada daryeelka bukaanka, yareysana waqtiga daaweynta iyo khaladaadka bini'aadamka. Meelaha loo adeegsado waxa ka mid ah:

- **Qalliinnada Saxda ah** – Robots sida *Da Vinci Surgical System* waxay dhakhaatiirta ka caawiyaan qalliinnada adag.

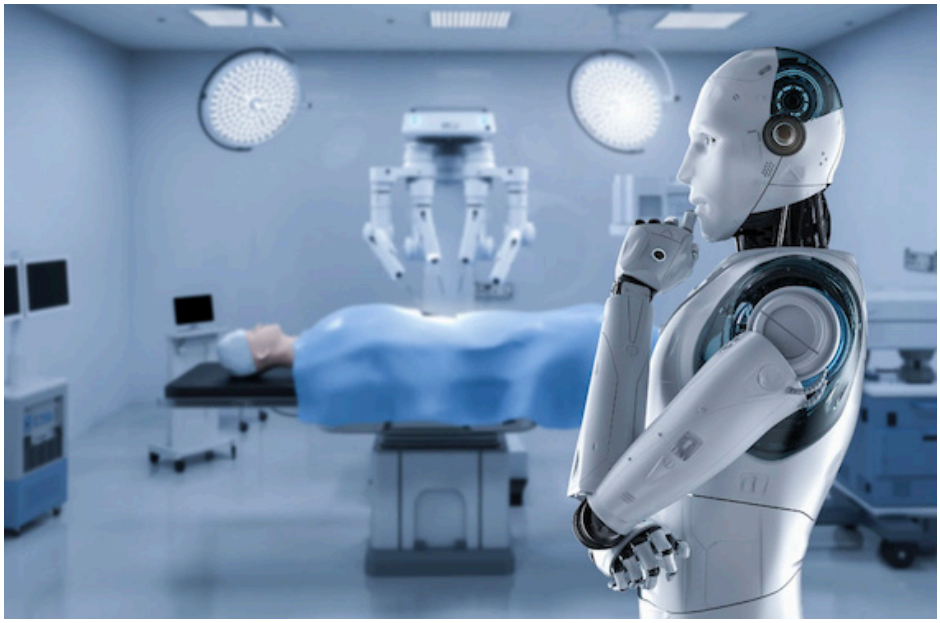
- **Baaritaanka iyo Daaweynta** – Robots sida *Endoscopy Robots* waxay baaraan jirka gudihiisa.





- **Caawinta Bukaanada** – Robots sida *Exoskeletons* waxay caawiyaan dadka naafo ah.

- **Gurmadka Degdegga ah** – Robots wax ka qabta xaaladaha degdegga ah sida cudurrada faafa.

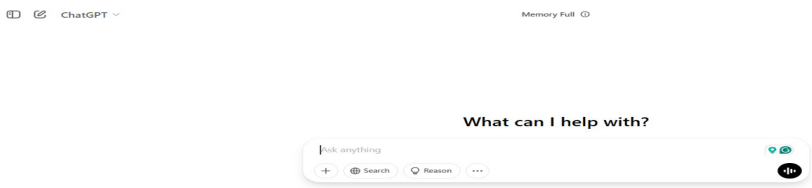


Waxbarashada iyo Cilmi-baarista

Robot-yada cilmi-baarista iyo waxbarashadu waxay ka caawiyaan ardayda iyo cilmi-baarayaasha inay bartaan tiknoolajiyada cusub. Haddaba, garaadka macmalka ah (AI) ee qaababka luuqadaha balaaran (Artificial Intelligence (AI) large language models (LLM) waa barnaamijyo kombiyuutar oo aad u awood badan, kuwaas oo lagu tababaray xog aad u tiro badan, inta badan laga soo ururiyay shabakada Internetka. Barnaamijyadani waxay ka jawaabaan tilmaamaha ama amarada adeegsadaha si ay u fuliyaan hawlo kala duwan oo cajiib ah, oo ay ku jirto curinta qoraallo cilmiyeed. Maanta xogaha ina siiyo AI LLM, waxay u muuqdaan kuwo laysku halleyn karo balse waxa ku jira khaladaad yaryar iyo eex. Mustaqbalka dhow, saxnaanta macluumaadka ay soo saaraan bot-yadani waa la filayaa inay sii hagaagto, Haddaba garaadka macmalka(AI) kuwooda ugu caansan waxa ka mid ah**:**

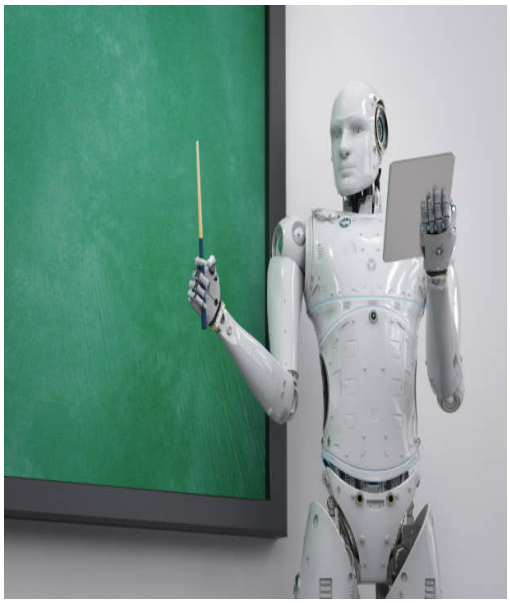
- **ChatGPT** : waxaa la bilaabay dabayaaqadii 2022, waxa soo saartay shirkada OpenAI ChatGPT wuxuu noqday mid ka mid ah barnaamijyada AI ee ugu horreeya, isagoo leh dad badan oo isticmaala. Wuxuu soo saari karaa qoraallo u eg kuwa bini'aadamka, ka caawin karaa abuurista waxyaabaha la qorayo, ka jawaabi karaa su'aalaha, iyo wax kale oo badan. Waxaa socda hormar aad u weyn oo lagu sameynaayo ChatGPT dhanka xawaaraha iyo garaadka, sidoo kale waxa ay leeyihiin awood isdhexgal badan

(multimodal), taasoo u oggolaanaysa isticmaaleyaasha inay la falgalaan sawirrada iyo falanqeeyaan xogta muuqaalka ah. https://chatgpt.com/



- **Canva:** waa mid kale oo AI ah, awood u leh naqshadaynta iyo tafatirka sawirrada, iyadoo adeegsanaysa qaabka ay soo saartay shirkada OpenAI.
- **DeepSeek:** waxaa soo saartay shirkad shiineys taaso tartan adag galineysay ChatGPT-ga
- **Google Gemini:** Waa mid ka mid AI -ga kaasoo leh awood badan wax uu ku soo bandhigo, laguna daray adeegyada ay bixiso shirkada Google-ga.
- **Microsoft Copilot:** Waa mid ka mid AI-ga waxa iska leh shirkada lagu magacaabo Microsoft.

Robot-yada waxbarta igana wax bara – Robots sida *Nao Robot* waxa uu wax bari karaa ardayda.



La-dagaalanka Musiibooyinka iyo Samatabbixinta

Robot-yada samatabbixinta waa qalab casri ah oo loo adeegsado gurmadka degdega ah marka ay dhacaan musiibooyin dabiici ah ama kuwa bini'aadamka sababo. Waxay kaalin muhiim ah ka qaataan badbaadinta nolosha dadka, gaar ahaan meelaha halista ah ee aanay bini'aadamku si fudud u gali karin. Hadddaba, meelaha loo adeegsado:

- **Dabka Daminaya** – Robots sida *Colossus Firefighting Robot*.

- **Samatabbixinta Dhismooyinka Dumay** – Robot-ka wax ka raadraaca dhismooyinka dumay.

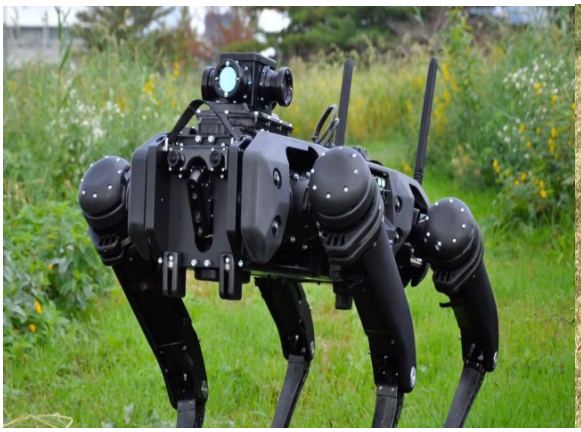
- **Ka Hortagga Sunta iyo Shilalka Nukliyeerka** – Robots la geeyo goobaha sunta ah sida *Fukushima Disaster Robots*.

Militariga iyo Ammaanka

Robot-yada militariga iyo amniga waa aalado casri ah oo loo adeegsado si kor loogu qaado difaaca qaranka, loo yareeyo halista ciidamada, iyo in si degdeg ah oo sax ah loo fuliyo hawlgallo amniyeed. Teknoolojiyaddan waxay sare u qaaday tayada iyo badbaadada howlgallada militariga iyo ilaalinta gudaha. Haddaba, m**eelaha loo adeegsado:**

- **Sirdoonka iyo Basaasnimada** – Drones sida *RQ-11 Raven*.

- **Ilaalinta Xuduudaha** – Robots wax ka qabta ilaalinta meelaha xasaasiga ah

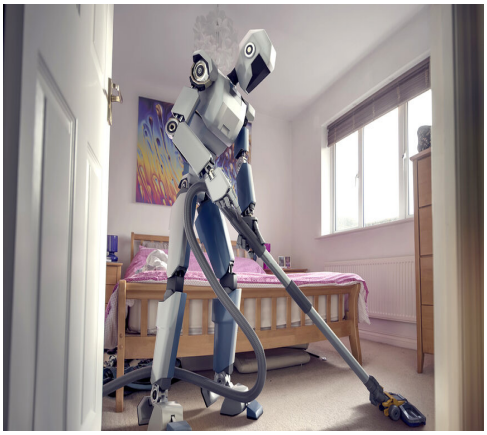


- Miino

Guryaha iyo Adeegyada loo Qabto dadka

Robot-yadu waxay door weyn ka ciyaarayaan nolosha casriga ah, gaar ahaan guryaha iyo adeegyada bulshada. Waxay ka caawiyaan dadka howlo kala duwan, laga bilaabo shaqooyinka guriga ilaa adeegyada dadweynaha. Halkan waxaa ku faahfaahsan qaababka ay robot-yadu uga shaqeeyaan guryaha iyo adeegyada bulshada. Haddaba, meelaha loo adeegsado waxaa kamid ah:

- **Makiinadaha iswada ee nadiifiya (Vacuum Robots)** sida **Roomba**, oo si toos ah u nadiifiya sagxadaha iyo roogagga.
- **Makiinadaha dhaqa daaqadaha (Window Cleaning Robots)** sida **Winbot**, oo si iswada nadiifiya muraayadaha iyo daaqadaha.
- **Makiinadaha dhaqida iyo engejinta dharka (Laundry Folding Robots)** oo dharka dhaqa, engejiya, oo xitaa u laabiya si habaysan.



- **Daryeelka Dadka Da'da ah** – Robots caawiya dadka waayeelka ah.

- **Adeegyada Hoteelada iyo Maqaayadaha** – Robots u adeegaya martida sida *Pepper Robot*.

Socdaalka iyo Gaadiidka

Robot-yada socdaalka iyo gaadiidka waa teknoolojiyad horumarsan oo si gaar ah loogu talagalay in lagu horumariyo habka safarka, gaadiidka dadweynaha, iyo gaadiidka shakhsi ahaaneed. Waxay qayb weyn ka qaateen horumarka baabuurta iswada (self-driving cars), diyaaradaha aan duuliye lahayn, iyo nidaamyada maaraynta taraafikada. Haddaba, meelaha loo adeegso waxa ka mid ah:

- **Gawaari Iswada** – Tesla Autopilot iyo Waymo Self-driving Cars.

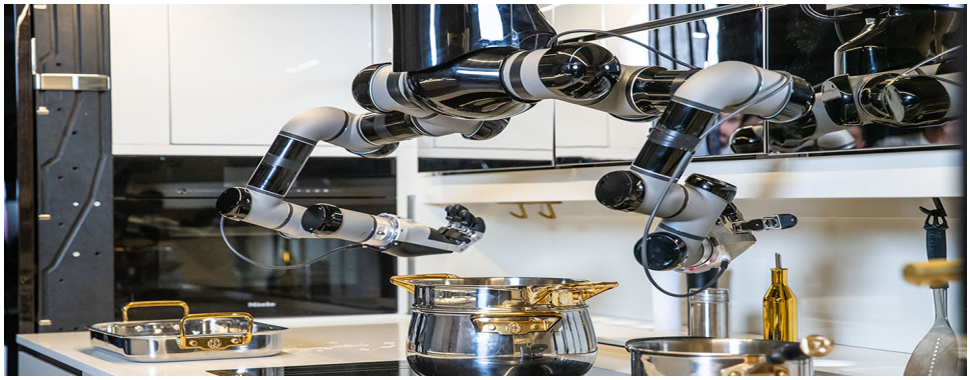
Robot-yada dadka la shaqeeya

Robots-kan waxaa loo yaqaannaa *"collaborative robots"* ama *"social robots"*, waxaana loogu talagalay inay si toos ah ula falgalaan bini'aadamka, iyaga oo bixiya taageero, adeegyo, iyo macluumaad iyadoo lagu saleynayo cod, taabasho ama muuqaal. Robots-ka sida **Amazon Alexa** iyo **Google Assistant** oo la falgala dadka si ay uga caawiyaan xasuusinta jadwalka, bixinta wararka, iyo xakamaynta qalabka kale ee guryaha. **Drones Xamuul Qaada** – Amazon Prime Air Drone.

- **Robots-ka caawiya dadka waayeelka ah** oo la socda caafimaadkooda, xasuusiya daawooyinka, una qabta shaqooyinka fudud sida keenista alaabta.
- **Robots-ka baraya carruurta** sida **Moxie**, oo caawiya korriinka maskaxeed ee carruurta iyagoo wax baraya una sheekeynaya.

Robot-yada Karin iyo Cunto Keenista

- Robots-ka sida **Moley Kitchen Robot**, oo si buuxda u kariya cunto, u adeegaya, una nadiifiya saxamada.
- **Cunto keenis (Delivery Robots)** sida **Starship Technologies**, oo si iswada cunto u geeya guryaha iyo meheradaha



Beeraha iyo Xannaanada Xoolaha

Horumarka teknoolajiyada, gaar ahaan garaadka macmalka ah (AI) iyo robot-yada, wuxuu si weyn u beddelay hababka dhaqanka beeraha iyo xannaanada xoolaha. Robot-yadu waxay beeraleyda ka caawinayaan kordhinta wax-soo-saarka, dhimista kharashaadka, iyo hagaajinta tayada wax-soo-saarka. Hoos waxaa ku xusan qaar ka mid ah hababka ay robot-yadu wax uga beddeleen beeraha iyo xannaanada xoolaha:

Beeraha

Robot-yadu waxay door muhiim ah ka ciyaarayaan horumarinta wax-soo-saarka beeraha iyagoo caawinaya beeraleyda si ay uga shaqeeyaan si hufan oo wax-ku-ool ah. Qaar ka mid ah adeegsiyada ugu caansan ee robot-yada beeraha waxaa ka mid ah:

Guridda iyo Goosashada

- Robot-yadu waxay si sax ah u goyn karaan dalagyada iyagoo adeegsanaya kamarado AI ah oo kala soocaya miraha bisil iyo kuwa aan bislaan.
- Waxay yareeyaan khasaaraha dalagga iyo khasaara kale oo ka yimaada goosashada gacanta. Robots sida *Agrobot Strawberry Picker*.

- **Bacriminta iyo Buufinta Sunta Cayayaanka**

  Robot-yadu waxay ogaadaan cayayaanka iyo cudurrada beeraleyda dhiba, waxayna si sax ah ugu buufin karaan sunta cayayaanka. Drones AI leh ayaa loo adeegsan karaa in lagu ilaaliyo dalagyada lagana ogaado meelaha ay waxyeelladu gaadhay. Sida Drones sida *DJI Agras*.

- **Xannaanada Xoolaha**

  Robot-yadu sidoo kale waxay wax ka beddeleen sida xoolaha loo xanaaneeyo, iyadoo laga faa'iidaysto AI iyo farsamooyin casri ah: Robots caawiya xoolaha sida lo'da iyo riyaha.

Waxqabadka 1aad:

Waxa aan ka doodeynaa faa'iidada ugu weyn ee robots nolosha

Waxqabadka 2aad:

Cilmi – baarista, waxa aan soo baareynaa robot-yada ay adeegsadaan warshadaha dalkeena.

Waxqabadka 3aad:

Waxa aan ka doodeynaa shaqada Robot-ka qabto iyo mida Bini'aadamka

Kooxda 1: Waxay difaacayaan in robot-yadu wanaajinayaan wax-soo-saarka.

Kooxda 2: Waxay sheegayaan in robot-yadu halis gelinayaan shaqooyinka bini'aadamka.

- Mid kasta ha diyaarsado dooddiisa.
- Kooxaha ha is weydiiyaan su'aalo.
- Macallinku ha qiimeeyo doodda oo ha soo saaro gunaanad.

Faa'iidooyinka Robots

- Waxay yareeyaan khaladaadka aadanaha.
- Waxay kordhiyaan wax-soosaarka iyo saxnaanta shaqada.
- Waxay caawiyaan caafimaadka iyo ammaanka bini'aadamka.
- Waxay fududeeyaan nolol maalmeedka, sida nadaafadda guryaha.
- Waxay horumariyaan cilmi-baarista iyo waxbarashada.

Caqabadaha Robots

- Waxay qaadi karaan shaqooyinka bini'aadamka, taasoo keeni karta shaqo la'aan.
- Qiimaha samaynta iyo dayactirka ayaa sareeya.
- Waxay khatar ku yihiin amniga haddii ay wax qaldamaan (e.g., hackers).
- Waxay u baahan yihiin xirfado gaar ah si loo barto loona isticmaalo.

Gunaanadka casharka

Robots waa qalab casri ah oo horumar weyn ka sameeyay dhinacyo badan oo nolosha ah. Waxay si weyn uga qeyb qaateen warshadaha, caafimaadka, waxbarashada, samatabbixinta, militariga, adeegyada bulshada, gaadiidka, iyo xataa beeraha. Sida aan ku soo baranay casharkaan, robot-yadu waxay ka kooban yihiin qaybo kala duwan sida sensors, actuators, processors, iyo control systems, kuwaas oo wada shaqeeya si ay u gutaan hawlaha loo igmaday.

Layli

1. Waxa aan qoraal ka soo sameynayaa waxyaabaha sameyn oo keeni adeegsiga Robot-yada nolosho oo dhan. Ku sharax erayga "robot" saddex eray oo kala duwan.
2. Sheeg saddex nooc oo robot ah oo adiga sameyn gaar ah kuugu leh.

Casharka 3aad

Qeybaha iyo Luuqadaha Barnaamijka ee Robots

Su'aal

- Maxay yihiin qeybaha ugu muhiimsan ee robot, maxayse u kala duwan yihiin?
- Waa maxay luqadaha barnaamijka ee loo isticmaalo robot-ka, maxayna u kala duwan yihiin?

Ujeeddooyinka Casharka

- Gartaan noocyada luqadaha barnaamijka ee loo isticmaalo robot-yada.
- Kala saaraan luqadaha sare iyo kuwa hoose ee lagu xakameeyo robot-ka.

Sharaxaad

Robot-ku waa qalab isku dhafan oo leh qaybo badan oo si nidaamsan u wada shaqeeya si uu u qabto hawlo gaar ah. Qeybahaasi waxay u kala baxaan afar qaybood oo waaweyn

Dareemayaal

- Waxay qabtaan xogta deegaanka ku xeeran robot-ka sida iftiinka, heerkulka, maqalka, ama taabashada.
- Tusaalooyin:
    - Sensor-ka iftiinka (light sensor)
    - Sensor-ka ka falceliya taabashada (touch sensor)
    - Sensor-ka ultrasonic (wax lagu ogaado masaafada)

Matoorada Dhaqdhaqaaqa)

- Waxay beddelaan tamarta korontada una roggaan dhaqdhaqaaq jireed sida wareeg ama socod.

- Tusaalooyin:
    - Matoorada (motors)
    - Pneumatic actuators (ku shaqeeya hawada cadaadiska leh)
    - Hydraulic actuators (ku shaqeeya dareere cadaadis leh)

Nidaamka Xakameynta

- Waa maskaxda robot-ka oo go'aamisa sida loo maareeyo xogta ka timaada dareemayaasha loona hago matoorada.
- Waxay ka koobnaan kartaa microcontroller ama computer yar oo lagu qoro barnaamij.

- **Koronto/ Awood Gelin**

- Robot-ka wuxuu u baahan yahay koronto si uu u shaqeeyo.
- Waxay noqon kartaa baytari, koronto toos ah, ama il tamareed kale.

Luuqadaha Barnaamijka ee Robots

Si robot-ku u guto shaqadiisa, waxaa lagu barnaamijiyaa luuqado gaar ah oo kombuyuutarada ah. Kuwa ugu caansan waa:

1. **Python:**
    - Waa luuqad sahlan oo awood badan, si weyn loogu adeegsado barnaamijyada sirdoonka macmalka ah iyo isgaarsiinta sensors.
2. **C/C++:**
    - Waa luuqad xawaare sare leh oo loo adeegsado marka loo baahdo in robot-ku falcelin degdeg ah sameeyo.
    - Inta badan microcontrollers-ka sida Arduino waxay isticmaalaan C/C++.
3. **Java:**
    - Waxaa loo adeegsadaa robot-yada isgaarsiinaya ama u baahan barnaamijyo ballaaran.
    - Waxay si fiican ula shaqaysaa interfaces iyo networks.

4. **ROS (Robot Operating System):**

   - Waa nidaam furan (open-source) oo isku xira qaybo badan oo software ah si loo abuuro barnaamijyo horumarsan oo robot-yada loogu talagalay.

Waxqabadka 1aad:

Waxa aan sawirayaa afarta qaybood ee ugu muhiimsan ee robot-ka iyo shaqadooda.

Waxqabadka 2aad:

Waxa aan isbarbardhigayaa laba luuqadood oo loo isticmaalo barnaamijinta robot-ka (tusaale: Python vs. C++).

Waxqabadka 3aad:

Waxa aan baarayaa sida sensor-ka iftiinka iyo matoorka wareega ay u wada shaqeeyaan.

Gunaanad Casharka

Robot-ku waa qalab isugu jira qaybo hardware iyo software oo wada shaqeeya. Sensors-ku waxay ururiyaan xog, control system-ku wuxuu go'aamiyaa ficilka, matooraduna waxay dhaqaaqaan. Barnaamijyadu waxay bixiyaan tilmaamaha si robot-ku u shaqeeyo. Luuqadaha sida Python, C++, iyo ROS waxay door muhiim ah ka ciyaaraan barnaamijinta robot-yada.

Layli

1. Sheeg afar qaybood oo robot-ka ka mid ah iyo shaqadooda.
2. Maxay tahay sababta Python loogu isticmaalo barnaamijinta robot-yada?
3. Waa maxay farqiga u dhexeeya actuator iyo sensor?

Qiimeynta cutubka

1. Waa maxay robot?
2. Yaa curiyay fikradda ugu horreysa ee robot-yada?
3. Xilligee ayay bilaabatay isticmaalka robot-yada?
4. Ka dood waxyaabaha sababay horumarka robot-yada.
5. Soo raadi ugu yaraan 3 nooc oo robot ah iyo meesha laga isticmaalo.
6. Koox kastaa waxay soo bandhigaysaa hal nooc oo robot ah.
7. Ka dood faa'iidooyinka iyo cilladaha robot-yada adeegga bulshada.
8. Maxay yihiin qeybaha ugu muhiimsan ee robot-ka?
9. Maxaa lagu barnaamijiyaa robot?